

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 September 2005 (01.09.2005)

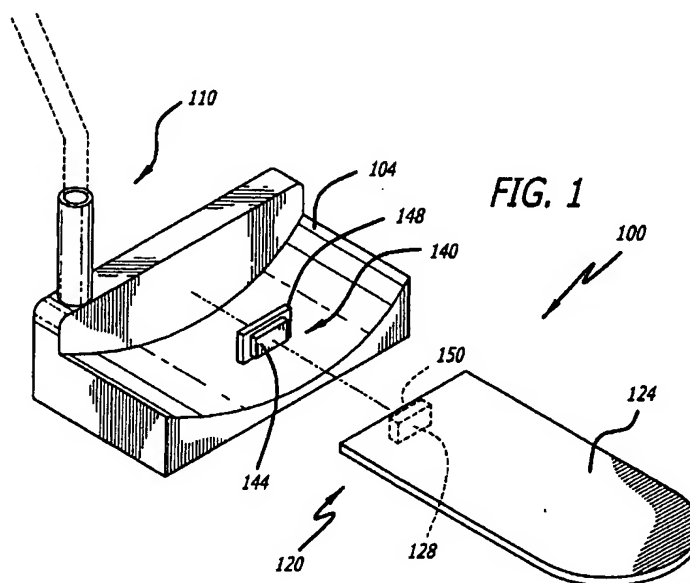
PCT

(10) International Publication Number
WO 2005/079933 A1

- (51) International Patent Classification⁷: **A63B 69/36**
- (21) International Application Number:
PCT/US2005/005344
- (22) International Filing Date: 18 February 2005 (18.02.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10/782,404 19 February 2004 (19.02.2004) US
60/652,311 10 February 2005 (10.02.2005) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: GOLF PUTTER ALIGNMENT ATTACHMENT SYSTEM



(57) Abstract: A golf putter alignment attachment (100), which includes an alignment device (120) supporting an alignment indicator. The device is attachable by a golfer or other individual or alternatively the golf putter manufacturer to the club head (110) so that the device extends outwardly therefrom and generally perpendicular to the club head face (164). When attached, the putter (110) can be oriented, visually using the alignment indicator, by the golfer relative to a golf ball (170) to assist the golfer in aiming the ball (170) towards a golf hole (174) while putting.

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**Declaration under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR,

HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

GOLF PUTTER ALIGNMENT ATTACHMENT SYSTEM

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is continuation-in-part of copending U.S. Patent Application Serial No. 10/782,404, filed February 19, 2004, and this application claims the benefit of a U.S. provisional application filed February 10, 2005 and whose serial number has not yet been assigned. The entire contents of both of these applications are hereby incorporated by reference.

BACKGROUND OF THE INVENTION

[0002] In the game of golf, about half the strokes in a round take place on the greens. Good performance on the greens is generally considered to be two putts. It can be very frustrating even for good players, if three or more putts are used following good fairway shots. The putt requires accuracy in the force of the stroke and also in the direction the ball is struck. In this regard, alignment of the putter head relative to the hole during putting is important. Obtaining proper alignment of a golf club to both the ball and the intended target line is a common problem for many golfers.

[0003] Putters have thus been designed to have integrally incorporated therein alignment means for assisting the golfers, especially those with high handicaps, to align their putters relative to the ball and the desired direction of ball travel. One example is disclosed in U.S. Patent No. 4,659,083 (Szczepanski), which shows a group of converging lines formed on the putter and converging towards the center of the base of the putter. (All patents, published applications and other publications mentioned anywhere in this disclosure are hereby incorporated by reference in their entireties.)

[0004] Another example is disclosed in U.S. Patent No. 4,688,798 (Pelz), which shows a putter having two or three golf ball shaped indicators formed on the putter. Other examples are disclosed in U.S. Patent Nos. 4,809,981 (Doran et al.), 6,739,980 (Scott et al.) and 6,817,953 (Farmer) and U.S. Patent Application Publications 2004/0053703 (Snyder) and 2004/0127305 (Tang et al.).

[0005] Also, it is often desirable for golfers to be able to adjust their putters to accommodate their individual needs. Examples of adjustable putters are disclosed

[0163] This invention provides countless options (with alignment indicia design, weight, etc) to the widest range of golfers with their varied preferences. Mallet to blade style putters can all benefit from the addition of the attachable alignment indicators. Design, weight and other variables can be as countless as there are golfers. This will allow the offering to nearly all golfers their preferred embodiment of this invention. Even unique, custom alignment indicators will be possible, giving golfers something that they have been offered in the past.

[0164] Further, the alignment attachment device of this invention can also have "attachments," and some embodiments can be adjusted (weight, length, indicia, etc.)

[0165] Some of the benefits of this invention are summarized below: (1) The alignment indicators can be available in a wide variety of styles and variations to allow each golfer to choose the alignment indicia best suited for their golf game at any given moment. (2) Alignment indicia (device/indicator) are removable and/or re-attachable (both individual alignment indicia or the entire alignment device). (3) Alignment indicia (device/indicator) are interchangeable with other alignment indicia (only one indicia possible vs. unlimited alignment indicia designs with our invention). That is, the alignment device/indicators can be interchangeable. They can be universally interchangeable between/among different manufacturers, or a manufacturer can limit the interchangeability to only its line of putters, or a manufacturer can further limit the interchangeability amongst its own putter product lines and even within specific individual putter models. For example, they may only make five different designs for a certain putter, but those alignment attachment device/indicators may not fit other models of putters they may have. They may do this for any of a number of reasons. One reason is to encourage the customer to purchase the other model putter, if that putter has alignment indicia that his current putter does not offer. Another reason is that the other putter design allows the alignment indicia to have more options such as design and weight. (4) Alignment indicia (device/indicator) have the option of being weighted or weight adjustable.

[0166] From the foregoing detailed description, it will be evident that there are a number of changes, adaptations and modifications of the present invention which come within the province of those skilled in the art. The scope of the invention includes any combination of the elements from the different species or embodiments disclosed herein, as well as subassemblies, assemblies, and methods thereof.

However, it is intended that all such variations not departing from the spirit of the invention be considered as within the scope thereof.

WHAT IS CLAIMED IS:

1. A golf putter alignment attachment assembly, comprising:
an alignment device;
the alignment device including an alignment indicator; and
the alignment device is attachable to a putter in an attached position such that the indicator and thereby the putter can be oriented relative to a golf ball by a golfer to assist the golfer in aiming the ball towards a golf hole during putting.
2. The assembly of claim 1 further comprising a putter connector securable to the putter, and the alignment device being attachable to the putter connector so as to thereby be in the attached position.
3. The assembly of claim 2 wherein the putter connector is securable to the putter with adhesive material.
4. The assembly of claim 2 wherein the putter connector includes a nut.
5. The assembly of claim 2 wherein the alignment device is releasable from the connector and reattachable thereto.
6. The assembly of claim 2 wherein the connector defines a first connector, the alignment device includes a second connector and the second connector is connected to the first connector with the alignment device in the attached position.
7. The assembly of claim 2 wherein the putter connector is manufactured onto the putter head of the putter.
8. The assembly of claim 1 wherein with the alignment device in the attached position, the indicator is oriented on and disposed along a line extending rearward from a golf ball impact center of a putter head of the putter.
9. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on top of a club head of the putter.

10. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on a backside of a club head of the putter.
11. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on a side of a club head of the putter.
12. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on a bottom surface of a club head of the putter.
13. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on a shaft of the putter.
14. The assembly of claim 1 wherein the alignment indicator defines an alignment line, and with the alignment device in the attached position, the alignment line is perpendicular to a ball striking face of a club head of the putter.
15. The assembly of claim 1 further comprising retail packaging holding the alignment device, the packaging being separate from the putter.
16. The assembly of claim 15 further comprising a putter connector held in the packaging.
17. The assembly of claim 16 wherein the putter connector is securable to the putter, and the alignment device is attachable to the putter connector and thereby in the attached position.
18. The assembly of claim 17 wherein the alignment device includes a connector for the putter connector.
19. The assembly of claim 1 further comprising attaching means for attaching the alignment device in the attached position to the putter.
20. The assembly of claim 19 wherein the attaching means includes a magnet.

21. The assembly of claim 20 wherein the magnet is attached to the alignment device, and the attaching means further includes a metal connector attachable to the putter and adapted to magnetically adhere the magnet such that the alignment device is in the attached position.
22. The assembly of claim 19 wherein the attaching means includes a tongue-and-groove arrangement.
23. The assembly of claim 19 wherein the attaching means includes a plurality of screws.
24. The assembly of claim 19 wherein the attaching means includes a screw.
25. The assembly of claim 19 wherein the attaching means includes an angled post disposable in an angled slot such that the alignment device is in the attached position.
26. The assembly of claim 19 wherein the attaching means includes a slide mount mountable to the putter and adapted to receive therein an end of the alignment device.
27. The assembly of claim 19 wherein the attaching means attaches the alignment device to a shaft of the putter.
28. The assembly of claim 19 wherein the attaching means includes a first attaching means for attaching the alignment device in a first attached position to the putter and an alternative second attaching means for attaching an alternative second alignment device in a different alternative second position to the putter.
29. The assembly of claim 19 wherein the attaching means allows for the attachment of the alignment device in alternative locations on the putter as selected by the golfer.
30. The assembly of claim 19 wherein the attaching means includes a putter connector member attached to the putter and to which the alignment device is releasably securable.

31. The assembly of claim 1 wherein the alignment indicator includes alignment indicia.
32. The assembly of claim 1 wherein the alignment indicator includes the shape of the alignment device.
33. The assembly of claim 1 wherein the alignment indicator is oriented longitudinally on the alignment device.
34. The assembly of claim 1 wherein at least a portion of the alignment indicator is removable from the alignment device.
35. The assembly of claim 1 wherein the alignment device includes a plate member which when in the attached position extends out from a club head of the putter and disposed perpendicular to the face of the club head.
36. The assembly of claim 35 wherein the plate member is approximately $3\frac{1}{4}$ inches long, $1\frac{1}{4}$ inches wide and $3/16$ inch deep, for example.
37. The assembly of claim 1 wherein the alignment device has a wedge shape with first and second angled surfaces.
38. The assembly of claim 37 wherein the first and second angled surfaces have different colors.
39. A golf putter alignment attachment assembly, comprising:
an alignment device; and
attaching means for attaching the alignment device to a putter in an attached alignment position such that the alignment device assists a golfer in orienting the golfer's putter relative to a golf ball to assist in aiming the ball during putting.
40. The assembly of claim 39 wherein the attaching means includes at least one screw.
41. The assembly of claim 39 wherein the attaching means is a magnetic attaching means.

42. The assembly of claim 39 wherein the attaching means is a male-female connection.
43. The assembly of claim 39 wherein the attaching means allows the golfer to attach the alignment device to the putter.
44. The assembly of claim 39 wherein the attaching means is a releasable attaching means such that the golfer can remove the alignment device from the putter after attaching it thereto.
45. The assembly of claim 39 wherein the attaching means includes a connector which is attached to the putter and to which the alignment device is attached when in the attached position.
46. The assembly of claim 45 wherein the connector defines a first connector and the alignment device includes a second connector which is connected to the first connector when the alignment device is in the attached alignment position.
47. The assembly of claim 46 wherein the alignment device includes a top flat piece and the second connector is secured to a lower surface of the top flat piece.
48. The assembly of claim 1 wherein the alignment device includes a top flat piece and the connector is secured to a lower surface of the top flat piece.
49. The assembly of claim 48 wherein the alignment device has an alignment axis to assist the golfer in visually aligning the putter.
50. The assembly of claim 49 wherein the alignment axis is a central longitudinal axis of the alignment device.
51. The assembly of claim 50 wherein in a plan view the alignment device is symmetrical about the central longitudinal axis.
52. The assembly of claim 49 wherein the alignment axis is defined at least in part by the shape of the alignment device.
53. The assembly of claim 49 wherein the alignment device has a tongue shape.

54. The assembly of claim 49 wherein the alignment axis is defined at least in part by an indicator on the alignment device.

55. A golf putter assembly including a golf putter having a shaft and a club head, the improvement comprising:

an alignment device removably attachable to the club head in an attached alignment position such that the alignment device assists the golfer in orienting the putter relative to a golf ball to assist in aiming the ball during putting.

56. The assembly of claim 55 wherein the alignment device includes a flat surface, the alignment device when in the attached alignment position includes the flat surface extending outwardly from the club head and generally perpendicular to the club head face.

57. The assembly of claim 55 further comprising a first connector attachable to the putter, the alignment device including a second connector, and the first and second connectors being connected together when the alignment device is in the attached alignment position.

58. The assembly of claim 55 wherein the alignment device defines a ball alignment axis.

59. The assembly of claim 58 wherein the alignment axis is defined at least in part by the shape of the alignment device.

60. The assembly of claim 58 wherein the alignment device includes a top surface alignment indicator, and the alignment axis is defined at least in part by the alignment indicator.

61. The assembly of claim 55 wherein the alignment device is removably attachable to the putter by a manufacturer of the golf putter.

62. The assembly of claim 55 wherein the alignment device is removably attachable to the putter by the golfer.

63. The assembly of claim 62 wherein the putter when obtained by the golfer and before the alignment device is attached, is pre-built or pre-fit to accept the alignment device when attached thereto by the golfer.
64. A putting method, comprising:
attaching an alignment assembly to a putter club head in an attached alignment position and orientation; and
with the device in the attached alignment position and orientation and visually using an alignment indicator of the assembly, orienting the putter relative to a golf ball to assist a golfer in aiming the ball toward a golf hole during putting.
65. The method of claim 64 wherein the attaching includes attaching the alignment assembly to a top surface of the club head.
66. The method of claim 64 wherein the attaching includes attaching the alignment assembly to a rearwardly disposed face of a club head of the putter.
67. The method of claim 64 further comprising removing the alignment assembly from the putter.
68. The method of claim 67 wherein the alignment assembly defines a first alignment assembly, and further comprising after the removing, attaching a second alignment assembly to the putter.
69. The method of claim 64 wherein the device, when in the attached alignment position and orientation, extends out from the club head and is disposed perpendicular to the face of the club head.
70. The method of claim 64 wherein the attaching includes attaching the alignment assembly to the club head such that the alignment assembly extends rearwardly from a blade portion of the club head.
71. A putting alignment attachment assembly, comprising:
an alignment device;
alignment indicator supported by the device; and
attaching means for attaching the alignment device to a club head of a putter

such that the indicator and thereby the putter can be visually oriented relative to a golf ball by a golfer to assist the golfer in aiming the golfer's putt and for allowing the alignment device to be subsequently detached from the club head.

72. The assembly of claim 71 wherein the attaching means includes a tongue extending forwardly from the alignment device and adapted to fit into and be held in a slot on a rear face of the club head.

73. The assembly of claim 71 wherein the attaching means removably attaches the alignment device to a rear face of a blade portion of the club head.

74. The assembly of claim 73 wherein the attaching means includes a screw adapted to screw the alignment device to the rear face.

75. The assembly of claim 74 wherein the attaching means includes at least one nut into which the screw threads.

76. The assembly of claim 74 wherein the alignment device includes a forward downwardly-depending flange having an opening for receiving the screw therein.

77. The assembly of claim 74 wherein the screw is adapted to screw into a pre-formed screw hole in the rear face.

78. The assembly of claim 71 wherein the attaching means attaches the alignment device to a blade portion of the club head such that the alignment device extends rearwardly over a mallet body portion of the club head.

79. The assembly of claim 71 wherein the attaching means attaches the alignment device to a blade portion of the club head such that the alignment device extends rearwardly over an upper channel of a mallet body portion of the club head.

80. The assembly of claim 71 wherein the attaching means attaches the alignment device on and to a recess on a top surface of the club head.

81. The assembly of claim 80 wherein the top surface is on a blade portion of the club head.

82. The assembly of claim 71 wherein the alignment device includes a forward surface, and the attaching means attaches the forward surface to a rearward surface of the club head.
83. The assembly of claim 82 wherein the forward surface is on a front plate of the alignment device.
84. The assembly of claim 83 wherein the alignment device includes a top plate and the front plate is secured to and extends downwardly from the top plate.
85. The assembly of claim 84 wherein the alignment device includes a bottom plate and the front plate is secured to and extends downwardly from the bottom plate.
86. The assembly of claim 82 wherein the rearward surface is a rearward surface of a blade portion of the club head.
87. The assembly of claim 71 wherein the attaching means includes a plurality of screws.
88. The assembly of claim 71 wherein the attaching means includes first attaching means for attaching a forward portion of the alignment device to a blade portion of the club head and second attaching means for attaching a rearward portion of the alignment device to a mallet body portion of the club head.
89. The assembly of claim 88 wherein the second attaching means includes a spacer member which spaces the rearward portion above the mallet body portion.
90. The assembly of claim 89 wherein the second attaching means includes a connector which passes through the rearward portion, the spacer member and into the mallet body portion.
91. The assembly of claim 90 wherein the connector is a screw.
92. The assembly of claim 89 wherein the spacer member defines a first spacer member, and the second attaching means includes a second spacer member.

93. The assembly of claim 88 wherein the first attaching means attaches a bottom surface of the forward portion to a top surface of the blade portion.
94. The assembly of claim 88 wherein a rearward portion of the mallet body portion is higher than a forward portion of the mallet body portion, and the second attaching means attaches the rearward portion of the alignment device to the rearward portion of the mallet body portion.
95. The assembly of claim 94 wherein the attaching means attaches the alignment device such that the alignment device extends over the forward portion of the mallet body portion.
96. The assembly of claim 94 wherein the rearward portion of the mallet body portion has an opening, and the second attaching means includes a connector member for passing through the rearward portion of the alignment device into the opening.
97. The assembly of claim 95 wherein the connector member is a screw.
98. The assembly of claim 71 wherein the alignment device includes a receiving area, and the indicator includes an indicator member releasably attachable to the receiving area and a different alternative indicator member releasably attachable to the receiving area with the indicator member removed from the receiving area.
99. The assembly of claim 98 wherein the receiving area includes a recess and the indicator member and the alternative indicator members are both configured to fit in the recess.
100. The assembly of claim 98 wherein the alternative indicator member is heavier or lighter than the indicator member to provide a different weighting effect on the club head.
101. The assembly of claim 100 wherein the alternative indicator member or the indicator member plus the alternative indicator member weigh approximately five to fifty grams.

102. The assembly of claim 100 wherein the indicator includes screw means for alternatively attaching the alternative indicator member or the indicator member to the receiving area.

103. The assembly of claim 100 wherein the indicator member is made of a first material and the alternative indicator member is made of a second material heavier or lighter than the first material.

104. The assembly of claim 100 wherein the indicator member has a first thickness and the alternative indicator member has a second thickness different than the first thickness and thereby has a different weight.

105. The assembly of claim 71 wherein the alignment device includes a recess and the indicator includes a first indicator member and a second indicator member, the first and second indicator members being alternatively attachable in the recess.

106. The assembly of claim 105 wherein the first and second indicator members have different indicators thereon.

107. The assembly of claim 105 wherein the first and second indicator members have different weights providing for different club head weighting effects.

108. The assembly of claim 71 wherein the attaching means includes a forward edge of the alignment device adapted to be snap-fit attached in a rearwardly disposed slot of the club head.

109. The assembly of claim 108 wherein the forward edge defines a first forward edge and the slot defines a first slot, and the attaching means includes a second forward edge of the alignment device adapted to be snap fit attached in a rearwardly disposed second slot of the club head.

110. The assembly of claim 71 wherein the attaching means includes a tongue extending forwardly from the alignment device and adapted to fit into and be held in a slot on a rear face of the club head.

111. The assembly of claim 71 wherein at least a portion of the indicator is removable from the alignment device for replacement purposes.

112. The assembly of claim 71 wherein a first portion of the indicator is removable from the alignment device and a second portion of the indicator is separately removable from the alignment device.
113. The assembly of claim 112 wherein the first portion is a first disc.
114. The assembly of claim 113 wherein the second portion is a second disc.
115. The assembly of claim 71 wherein the assembly weighs between a few grams and approximately 250-300 grams.
116. A golf putter head, comprising:
a blade portion;
a mallet body portion extending rearwardly from the blade portion; and
a recessed receiving area on an upper surface of at least one of the blade portion and the mallet body portion.
117. The golf putter head of claim 116 further comprising a member positionable in the recess area.
118. The golf putter head of claim 117 wherein the member is metal or plastic.
119. The golf putter head of claim 117 wherein the member has identifier indicia on a top surface thereof.
120. The golf putter head of claim 117 wherein the member has putter-golf ball alignment indicia thereon.
121. The golf putter head of claim 117 wherein the member has an identifier indicia shape.
122. The golf putter head of claim 117 wherein the member has a putter-ball alignment shape.
123. The golf putter head of claim 117 further comprising attaching means for releasably attaching the member in the receiving area.

124. The golf putter head of claim 123 wherein the attaching means includes a screw.
125. The golf putter head of claim 121 wherein the mallet body portion includes a hollow area providing access to screw the screw up into the recessed area and into the member.
126. The golf putter head of claim 123 wherein the attaching means includes a male-female connection.
127. The golf putter head of claim 123 wherein the attaching means includes a sliding rail-groove connection.
128. The golf putter head of claim 116 further comprising the recessed receiving area defining a first recessed receiving area, and a second recessed receiving area on an upper surface of the mallet body portion and proximate to the first recessed area.
129. The golf putter head of claim 128 wherein the first receiving area is adapted to receive therein a first member of a first shape and the second receiving area is adapted to receive therein a second member of a different second shape.
130. The golf putter head of claim 129 wherein the first member is a square having side lengths of approximately 4.5 centimeters and the second member is an equilateral triangle having side lengths of approximately 4.5 centimeters.
131. The golf putter head of claim 129 wherein the first and second members both have thicknesses of approximately 1/8 centimeter.
132. The golf putter head of claim 128 wherein the first and second recessed receiving areas are aligned in a line perpendicular to a putting face of the blade portion.
133. The golf putter head of claim 116 further comprising a hosel extending up from the blade portion.

134. The golf putter head of claim 116 further comprising a hosel extending up from the mallet body portion.

135. The golf putter head of claim 116 wherein the blade portion and the mallet body portion are formed as a single unitary member.

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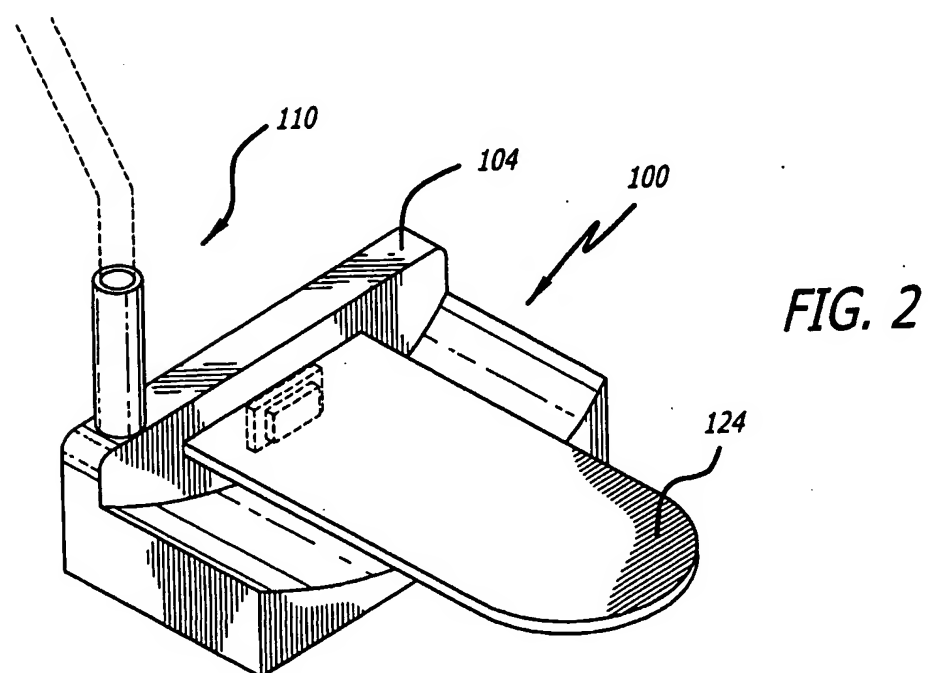
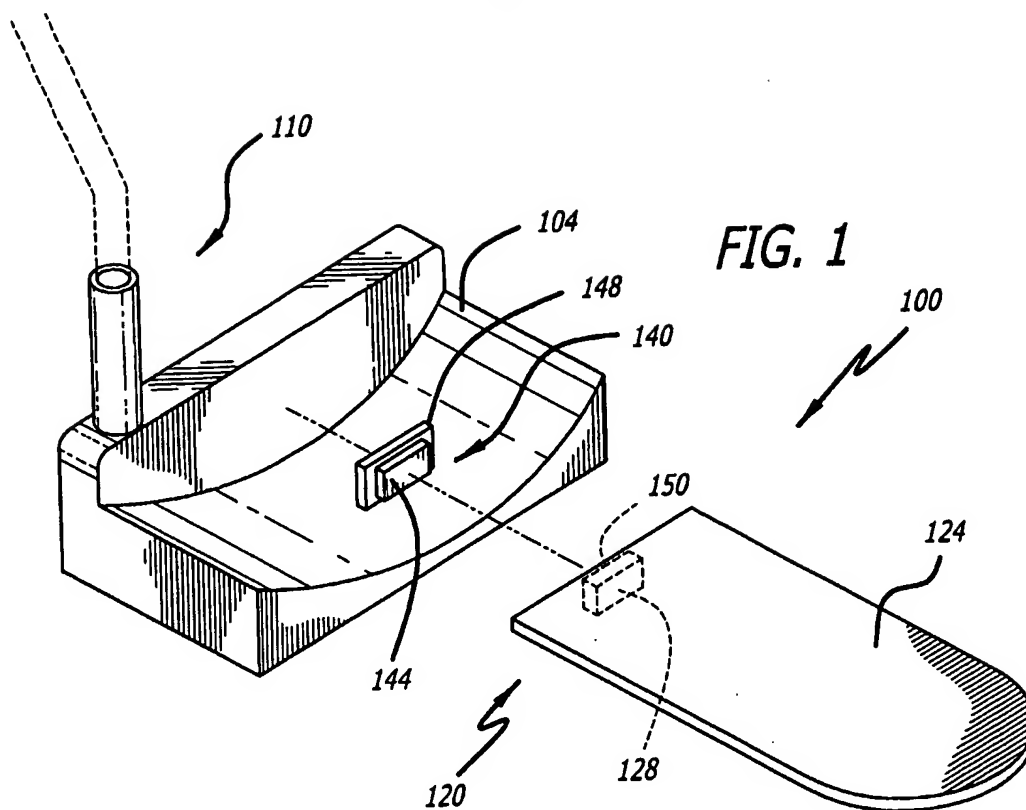
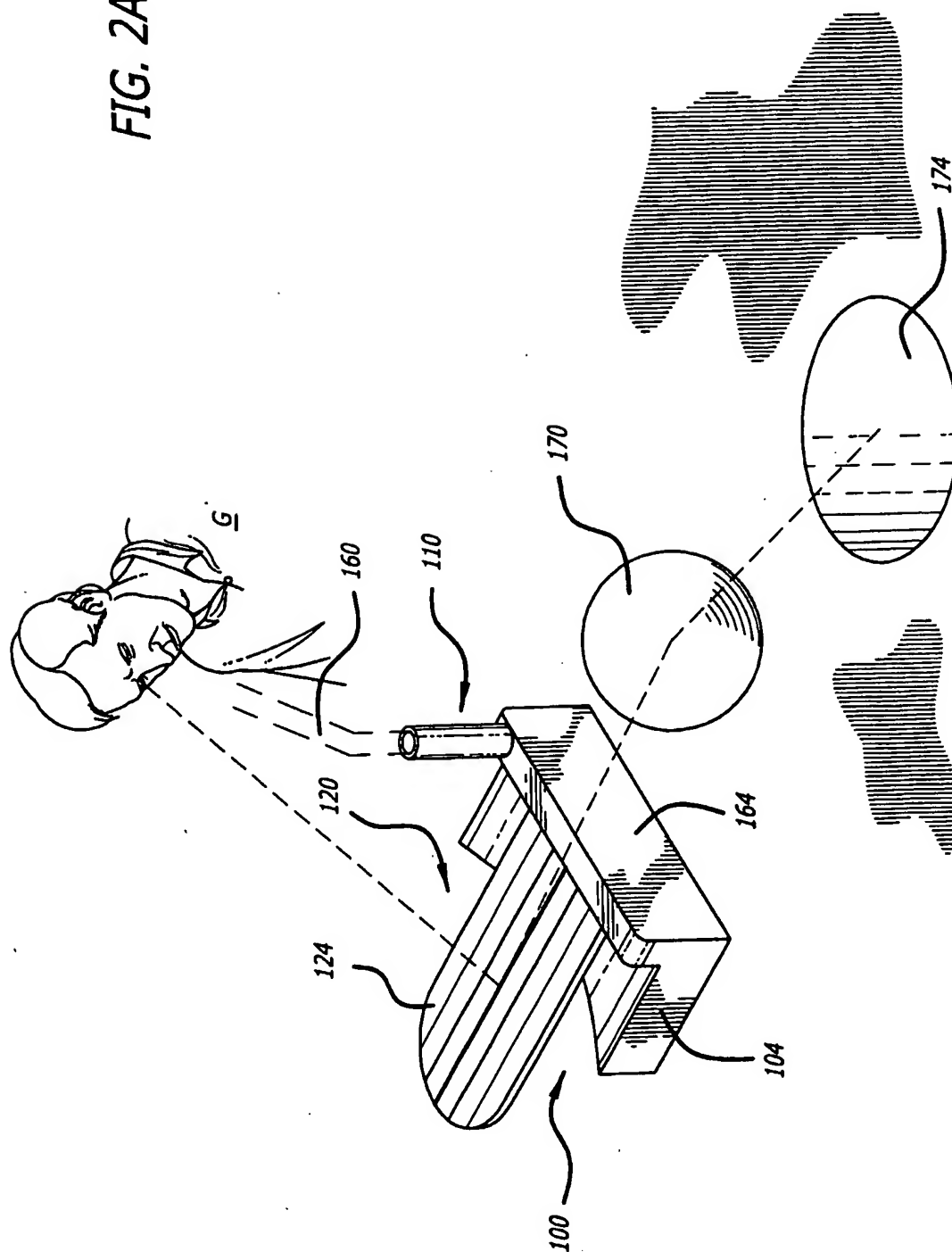


FIG. 2A



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FIG. 3

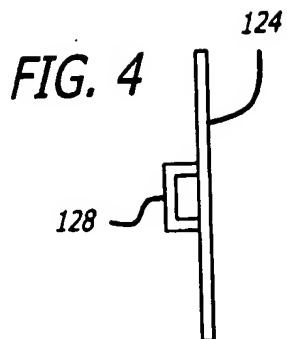
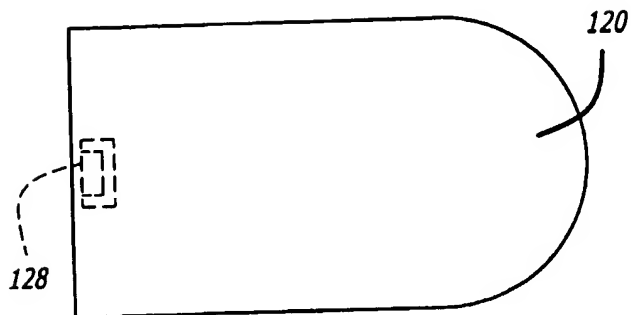


FIG. 5

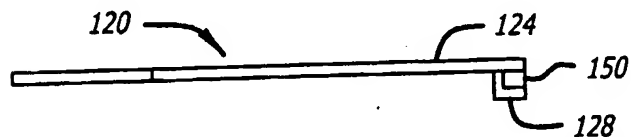


FIG. 6

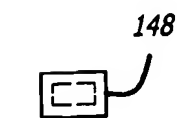


FIG. 7



FIG. 8

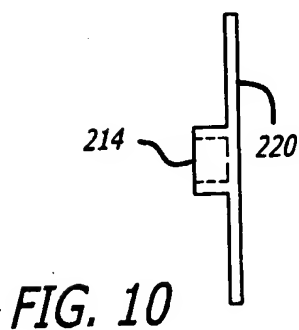


FIG. 10

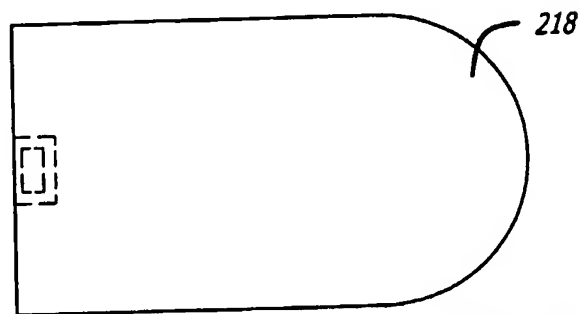


FIG. 9

FIG. 11

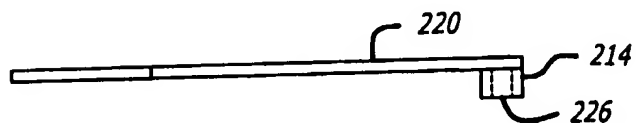


FIG. 12

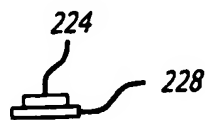


FIG. 13



FIG. 14

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FIG. 15

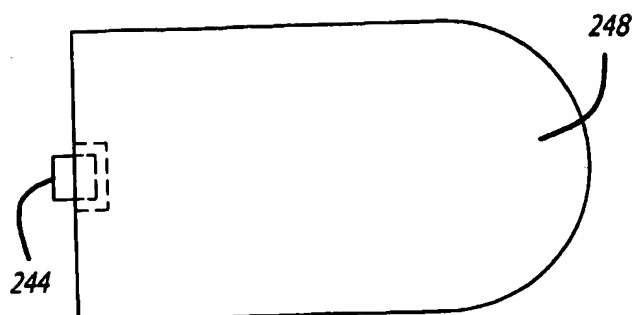
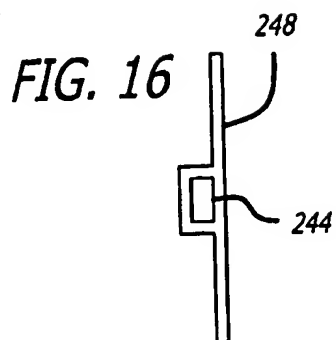


FIG. 17

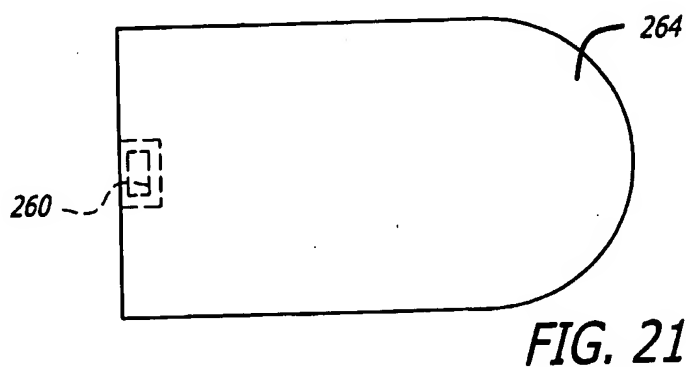
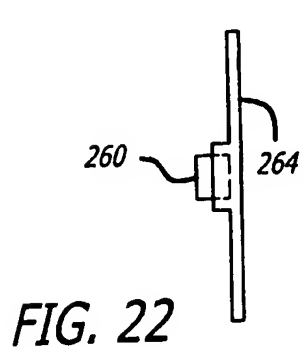
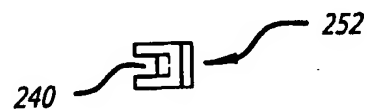
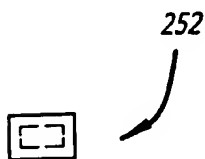
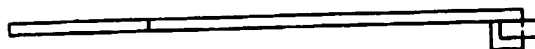


FIG. 23

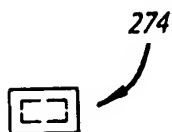


FIG. 24

FIG. 25

FIG. 26

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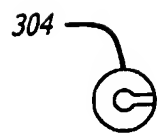
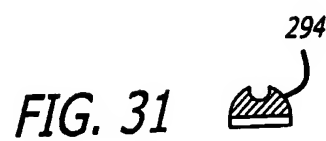
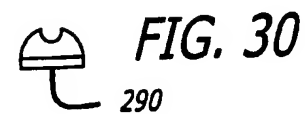
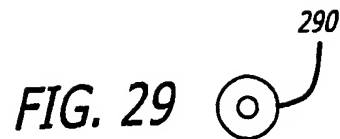
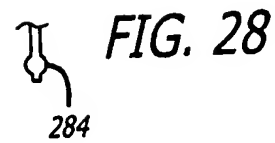
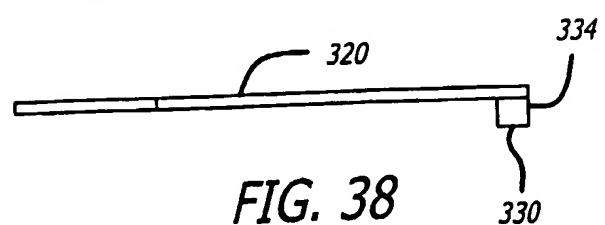
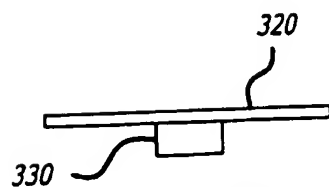
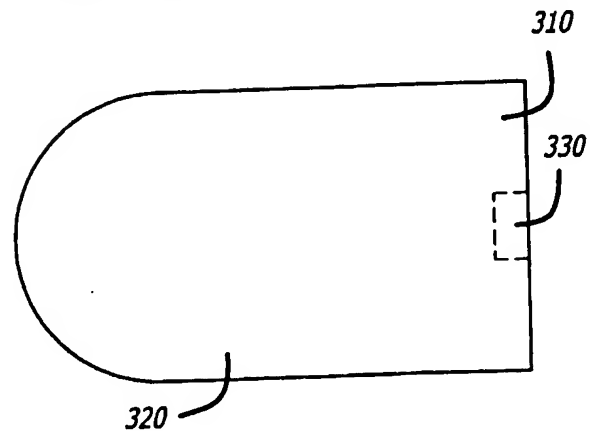


FIG. 36



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FIG. 39

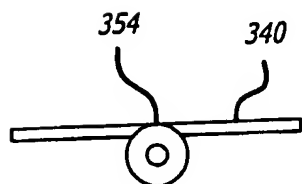
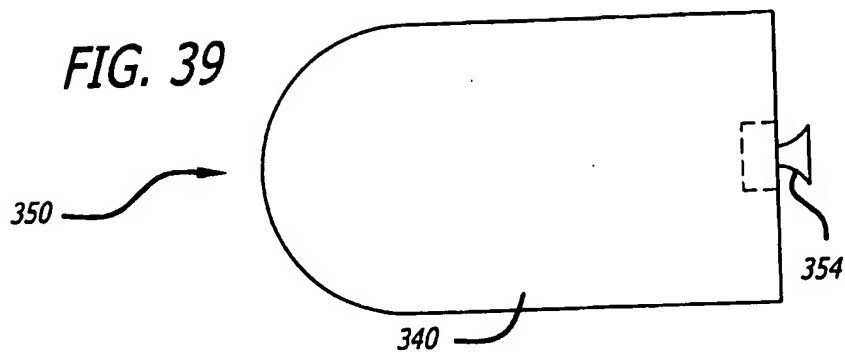


FIG. 40

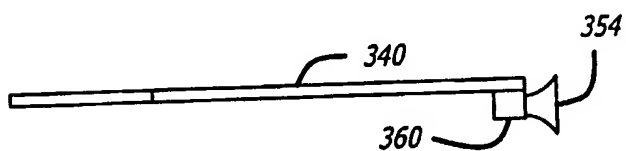


FIG. 41

FIG. 42

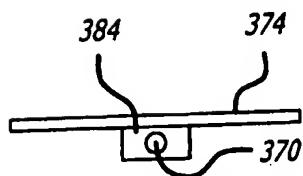
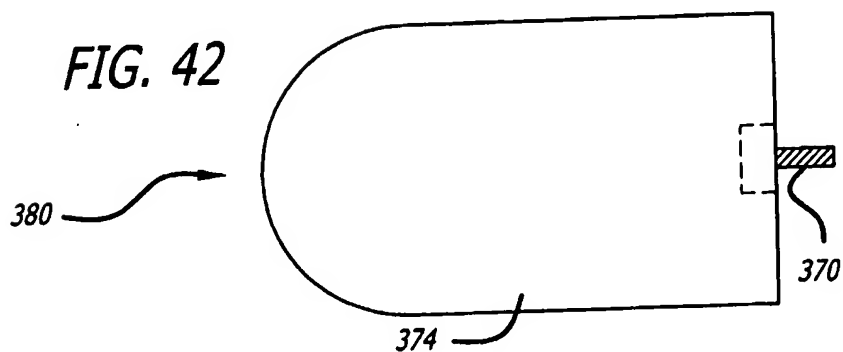


FIG. 43

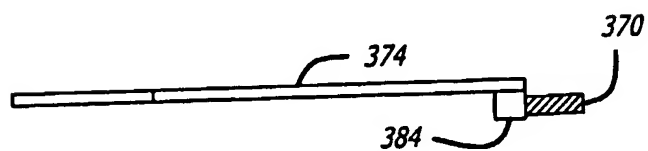
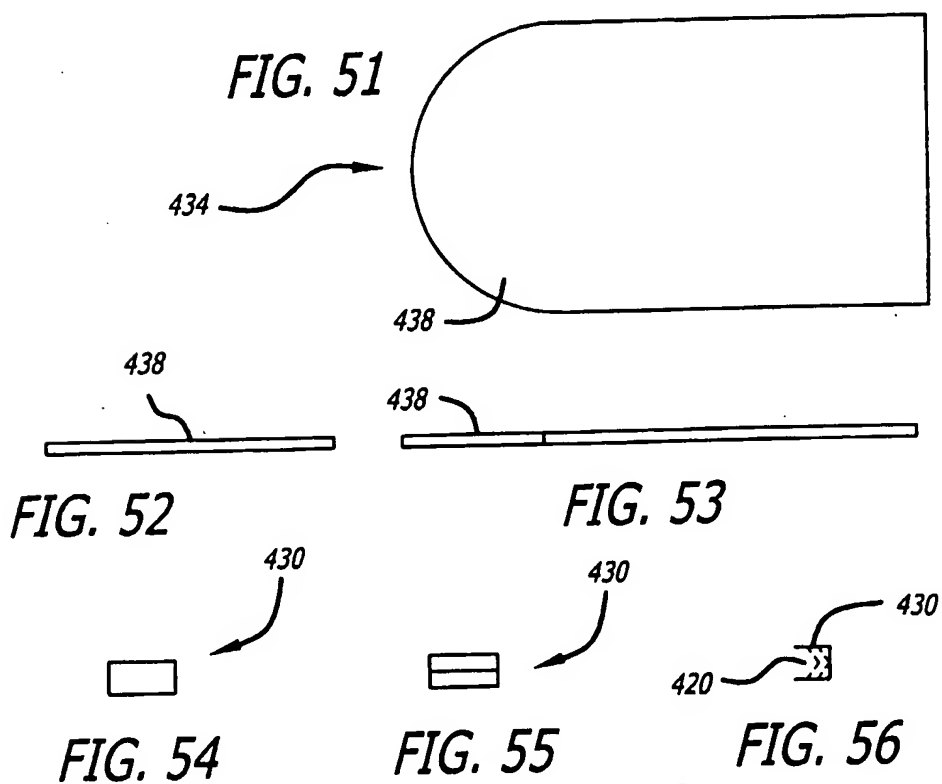
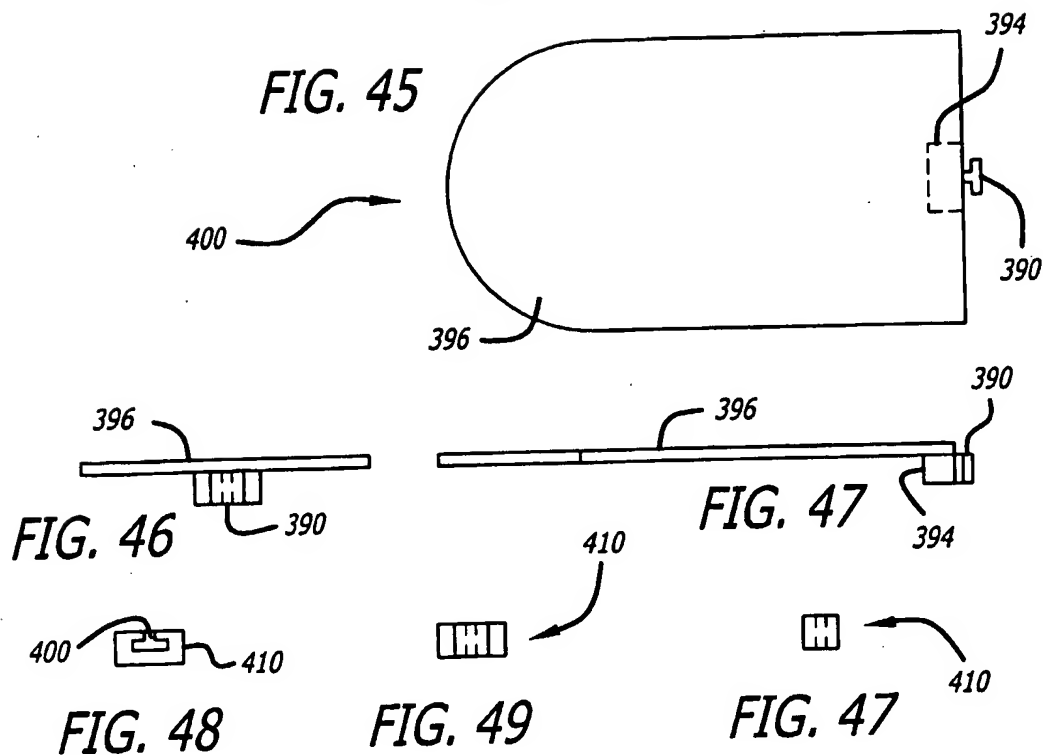
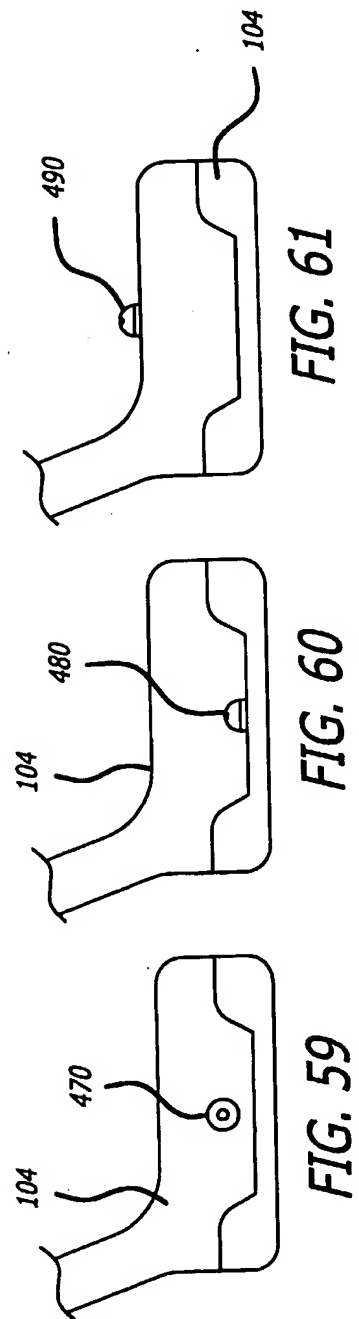
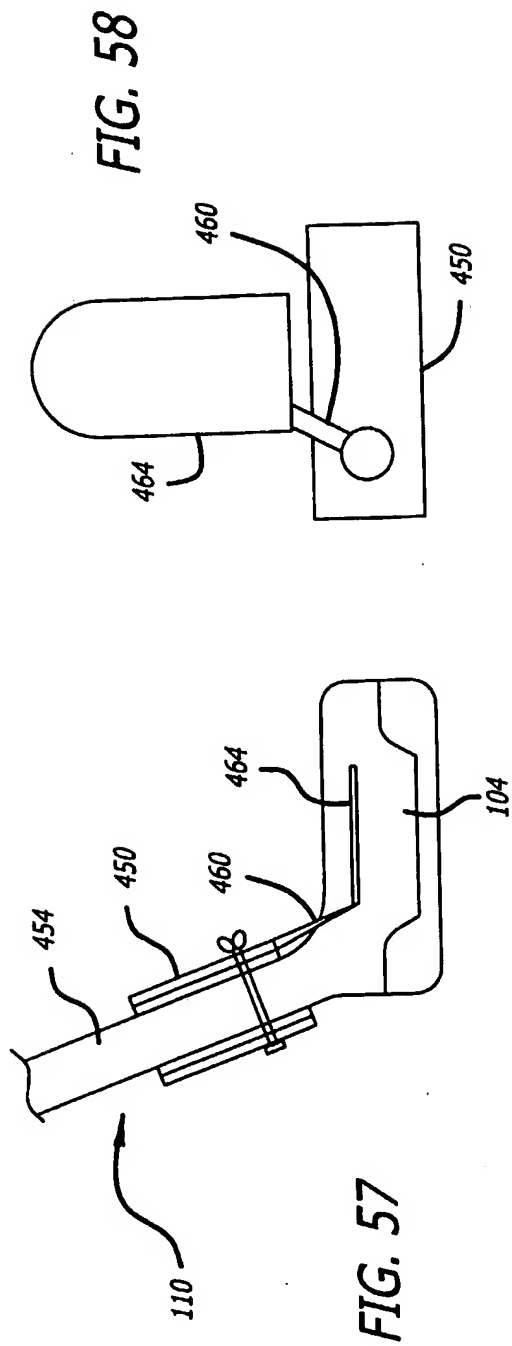


FIG. 44

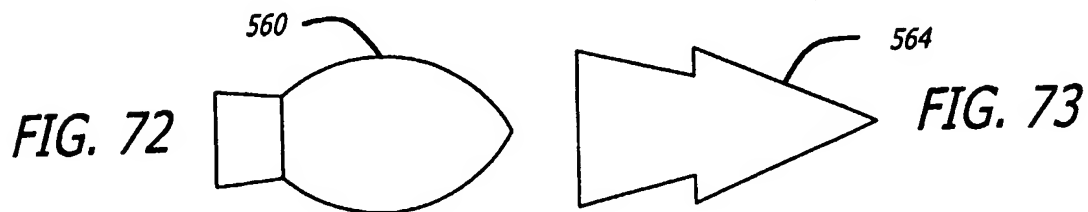
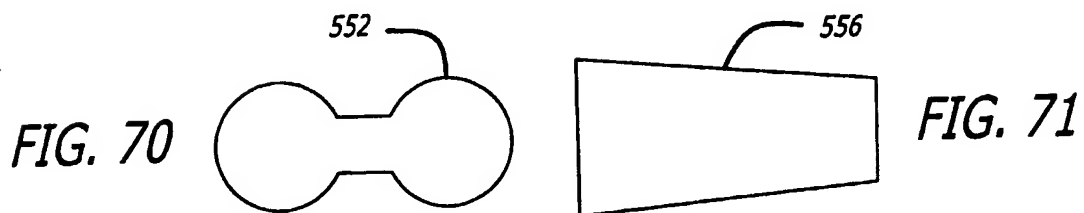
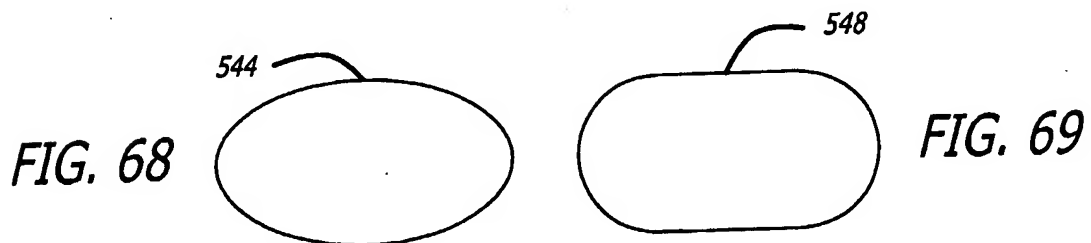
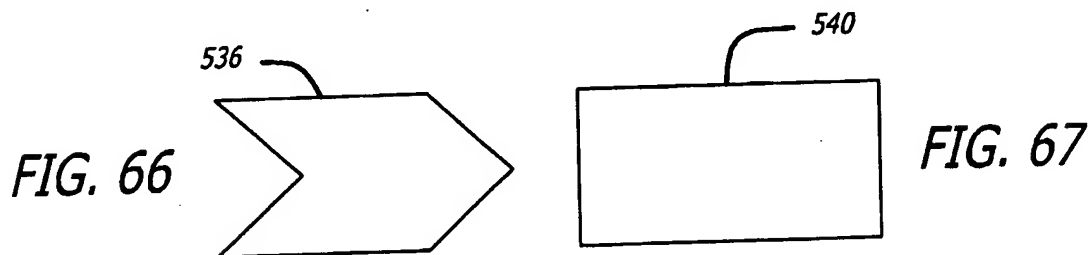
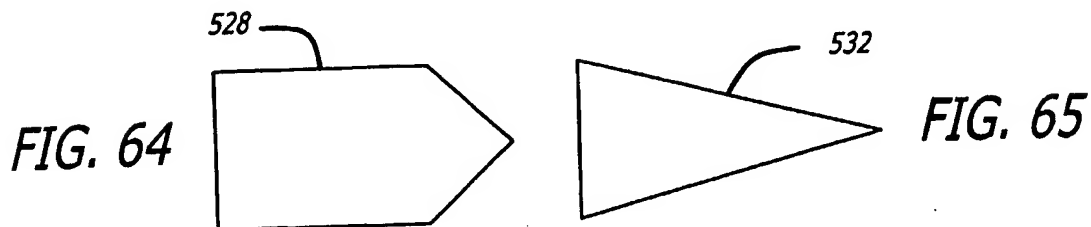
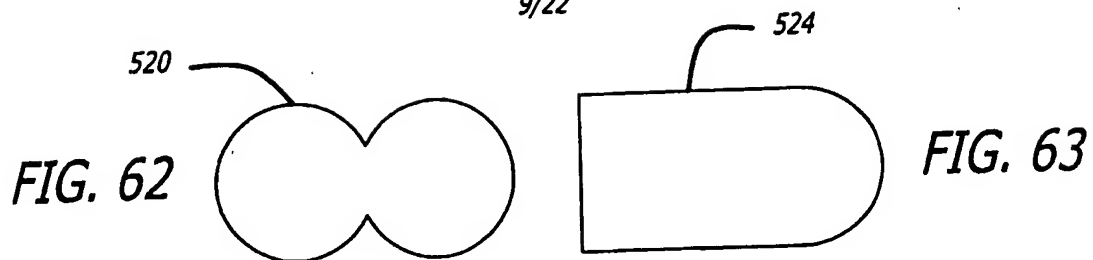
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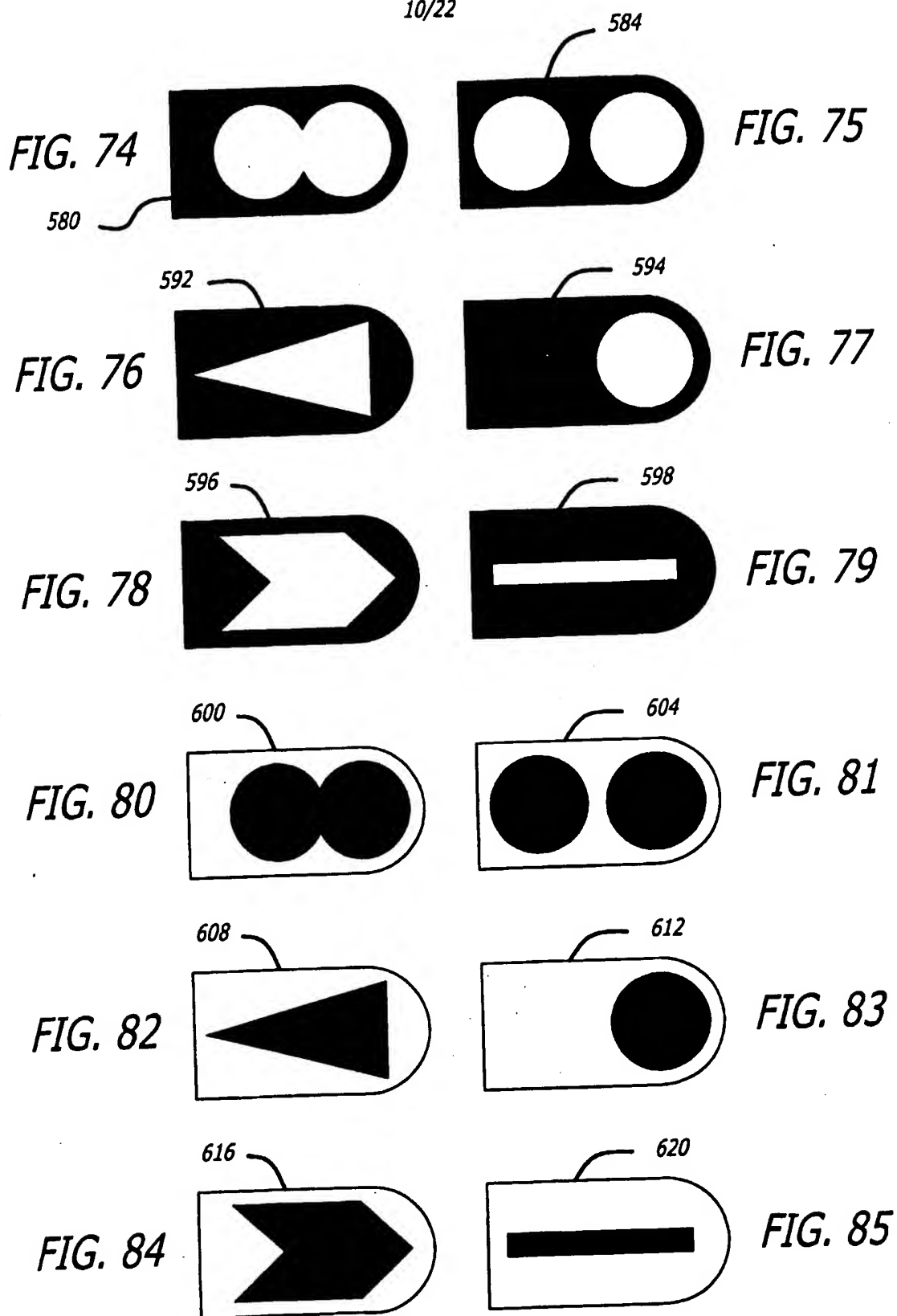
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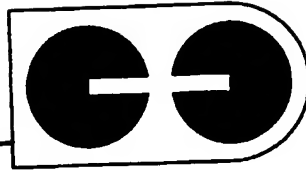
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FIG. 86

630



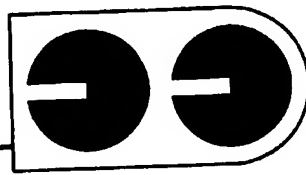
634



FIG. 87

FIG. 88

638



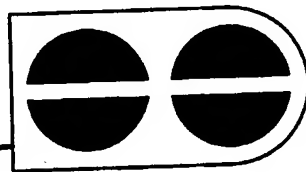
642



FIG. 89

FIG. 90

646



650

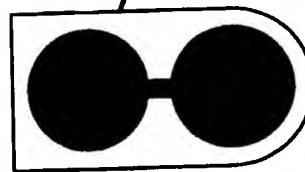
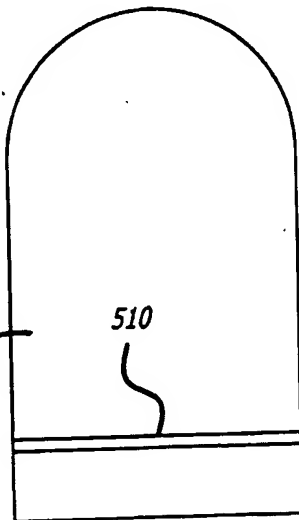


FIG. 91

FIG. 92

520



500

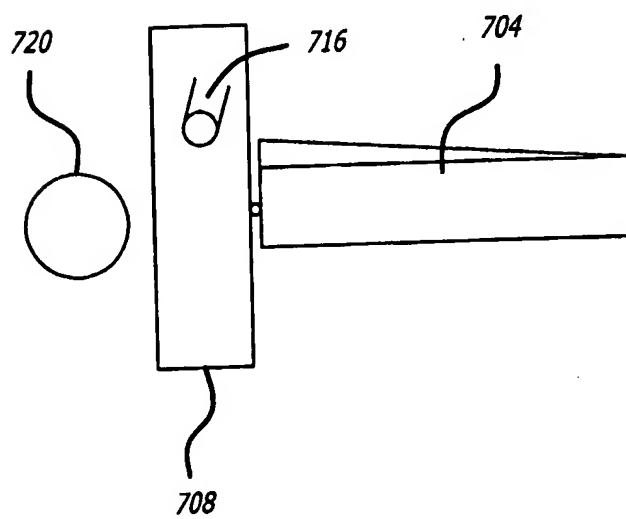
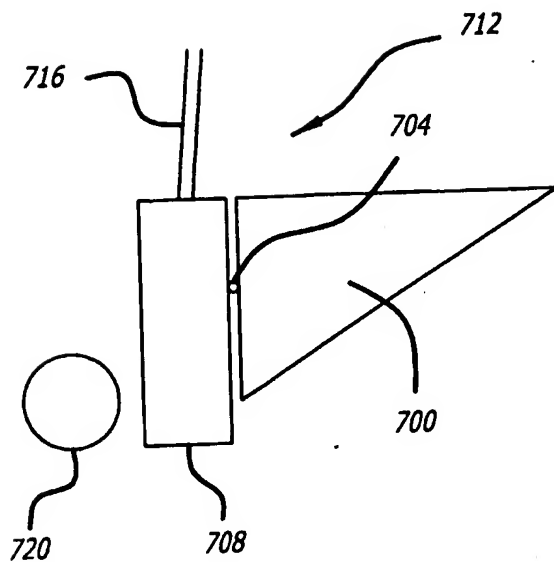
FIG. 93

520

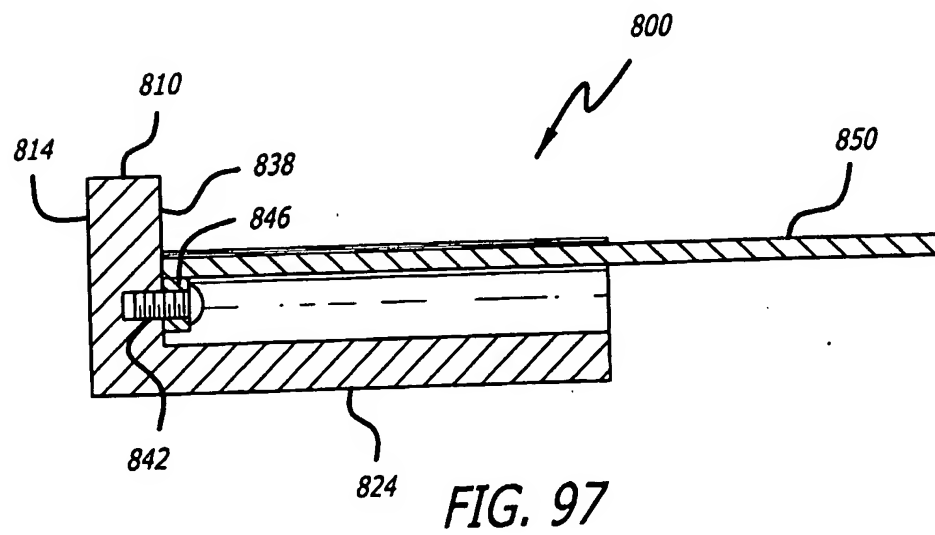
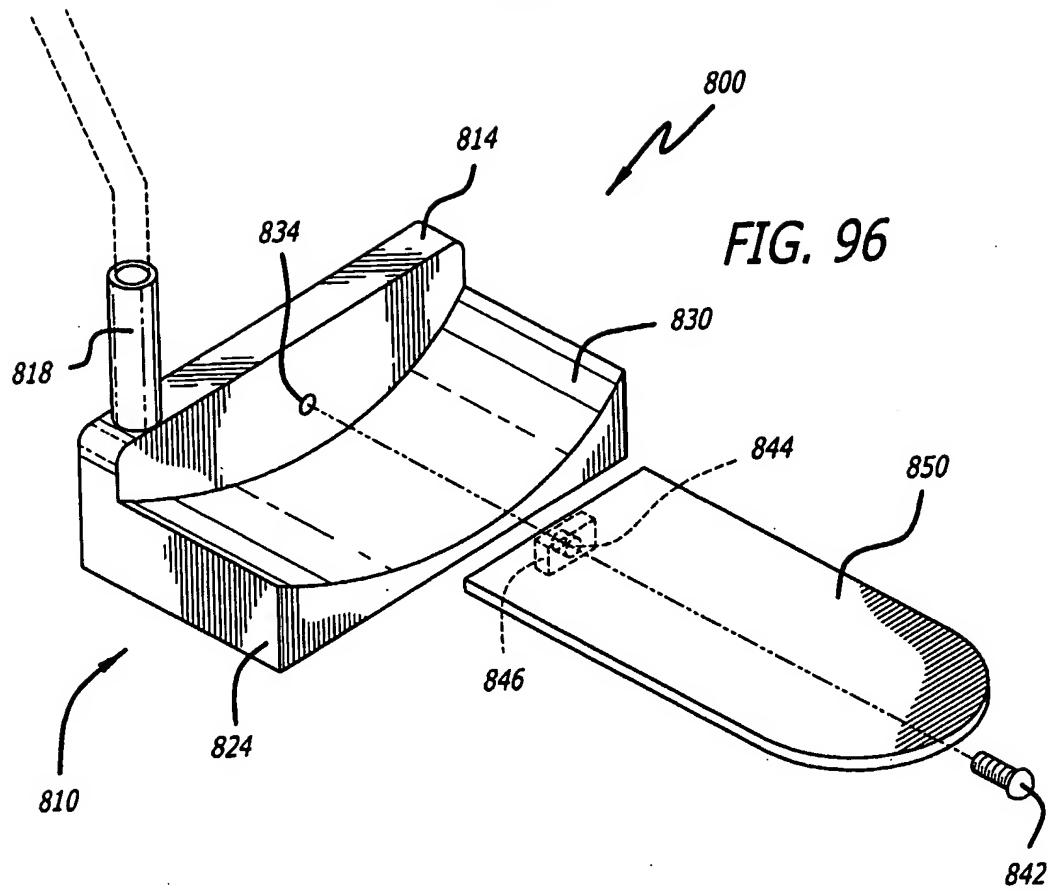
510



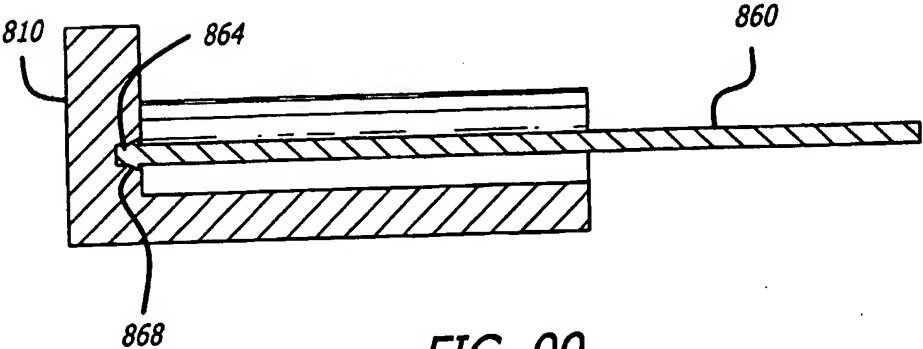
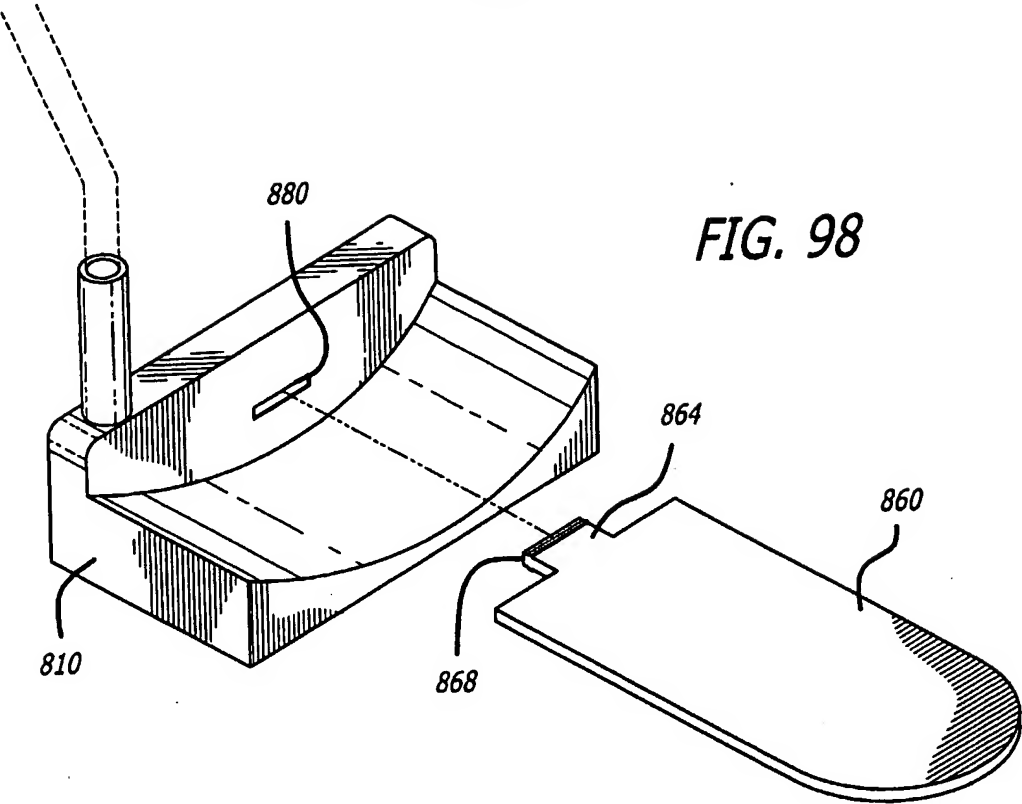
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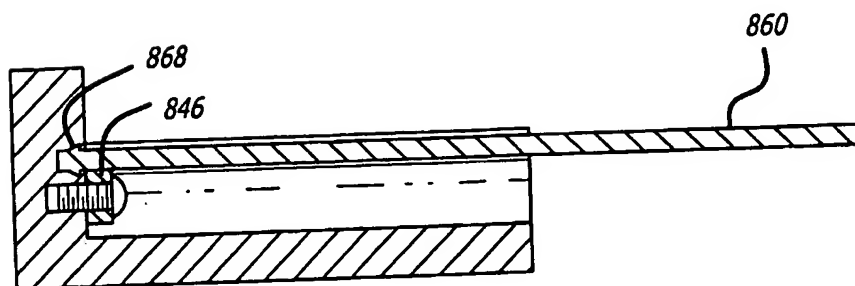
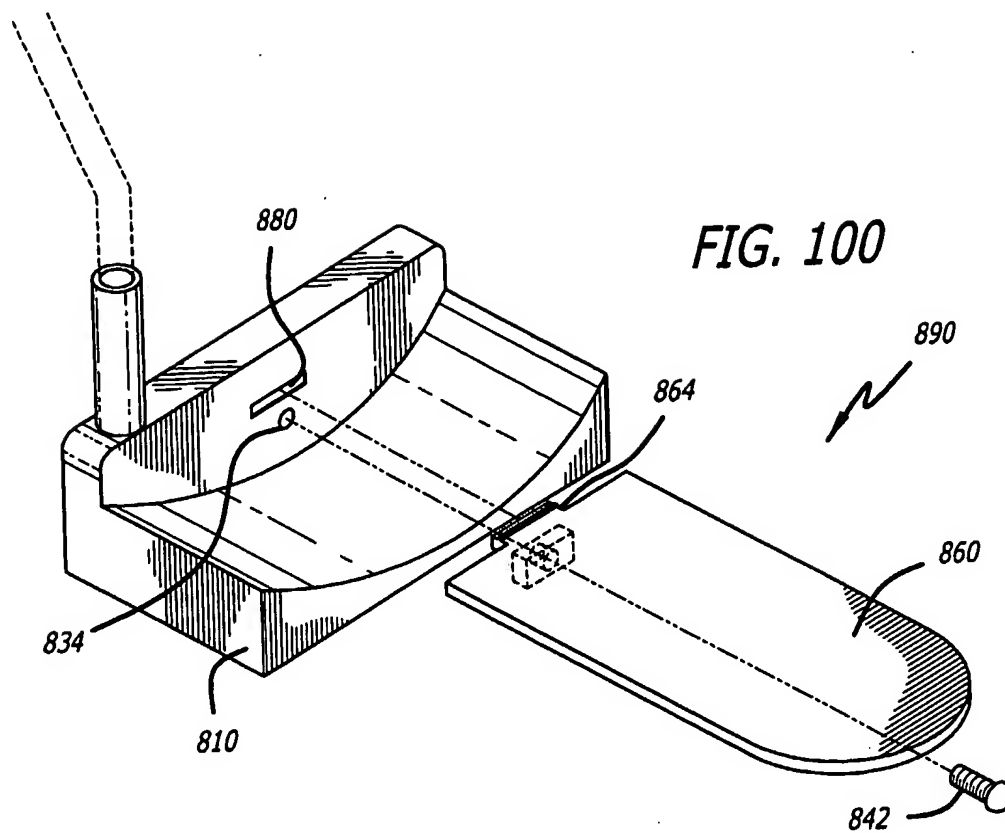


FIG. 101

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FIG. 102

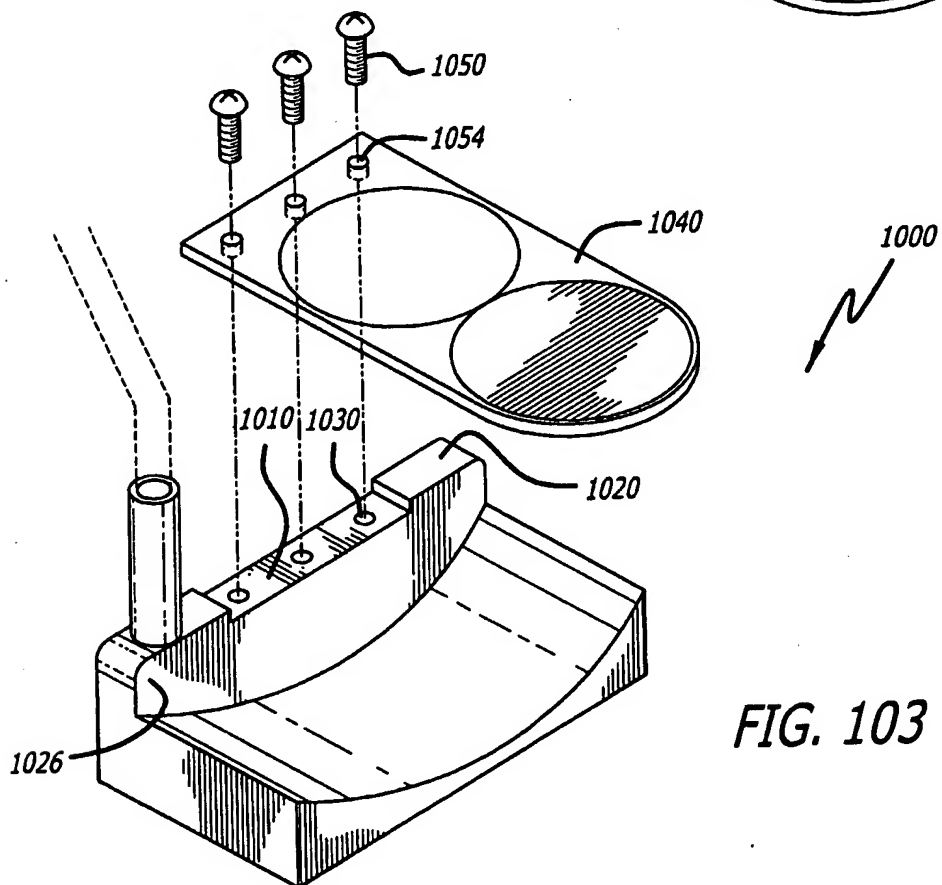
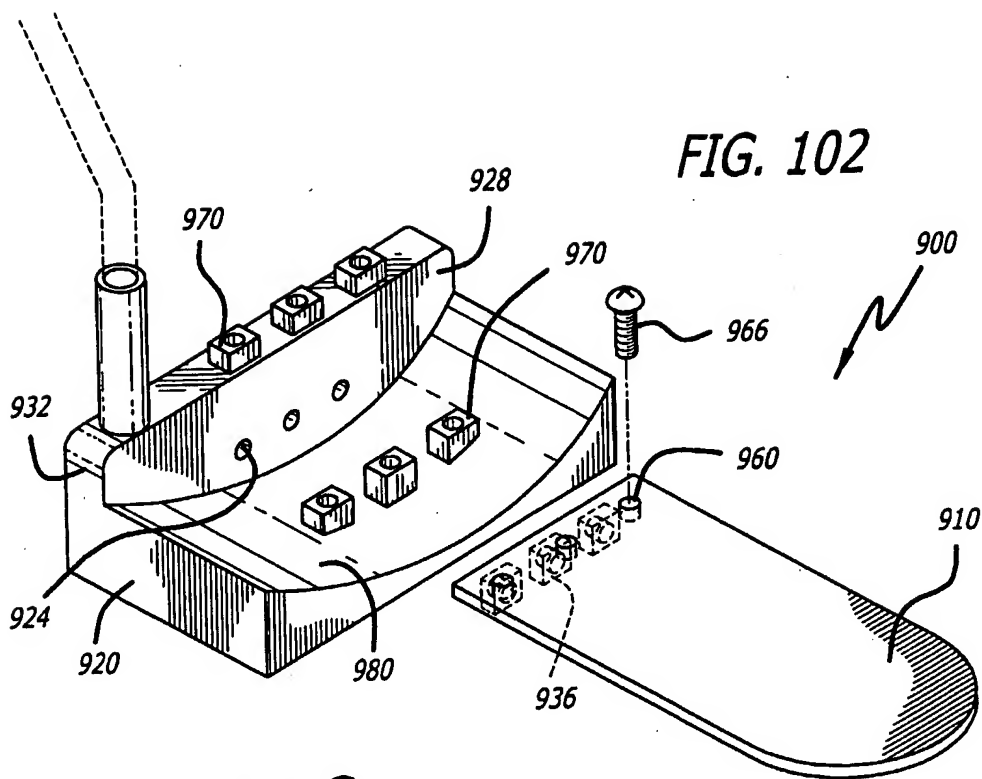
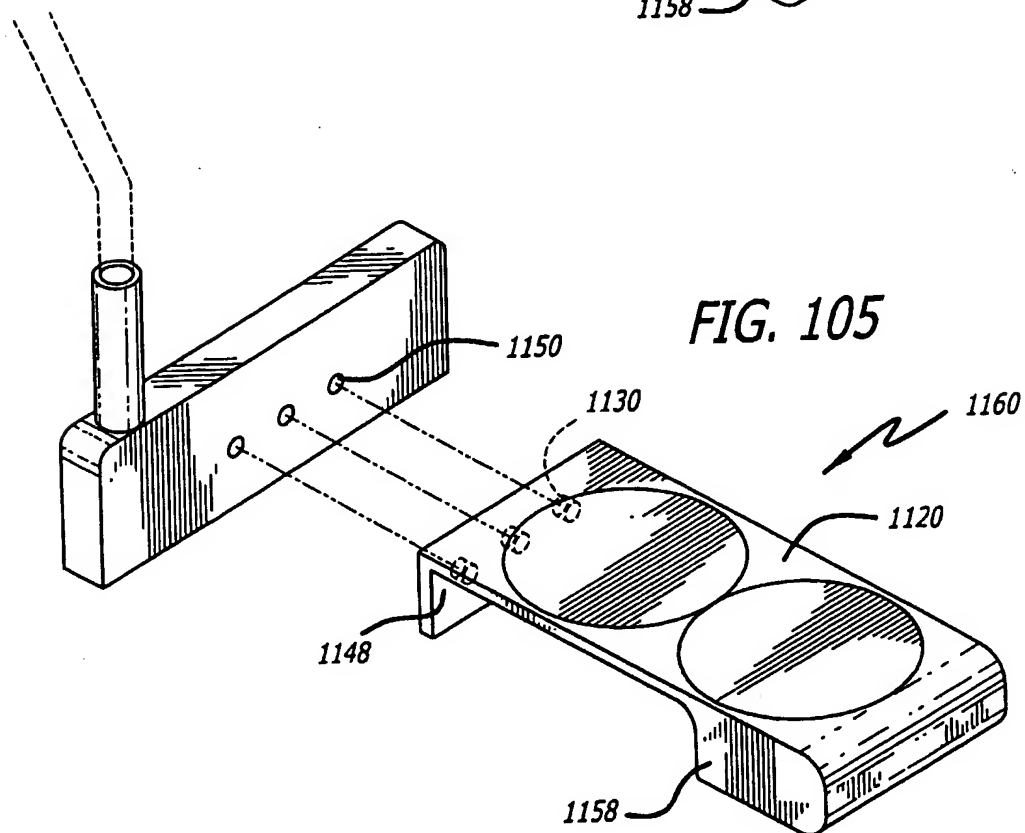
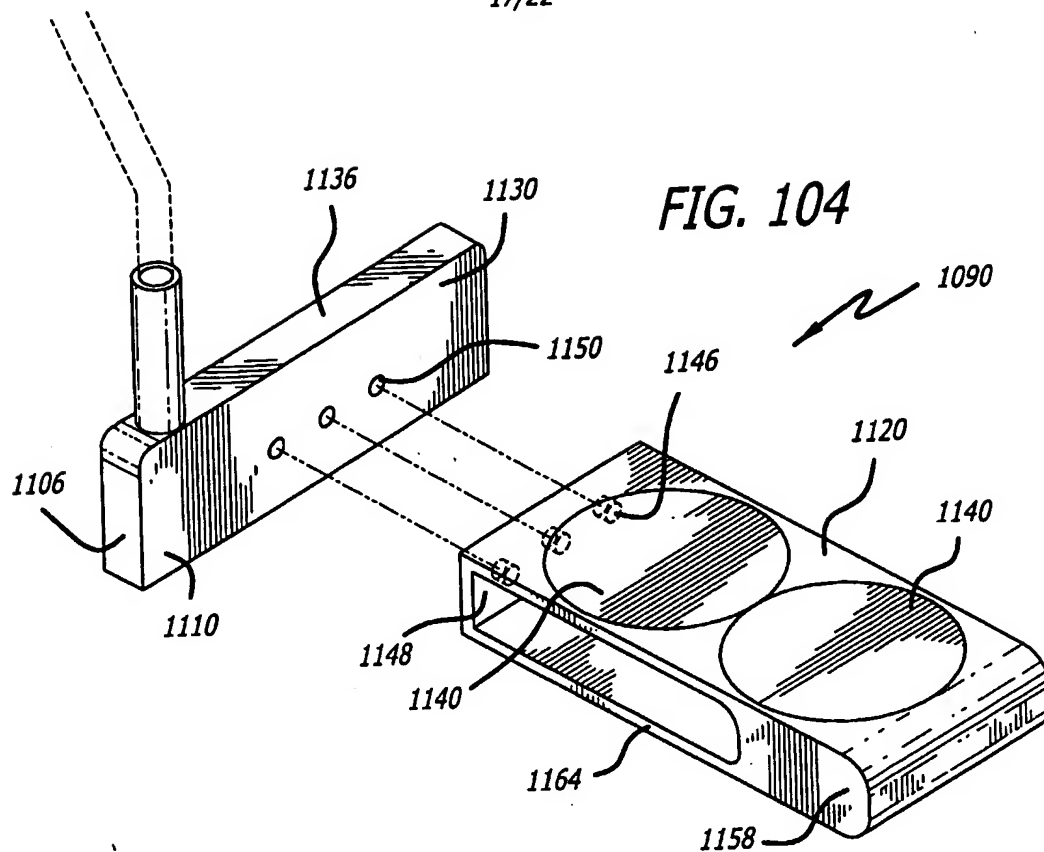
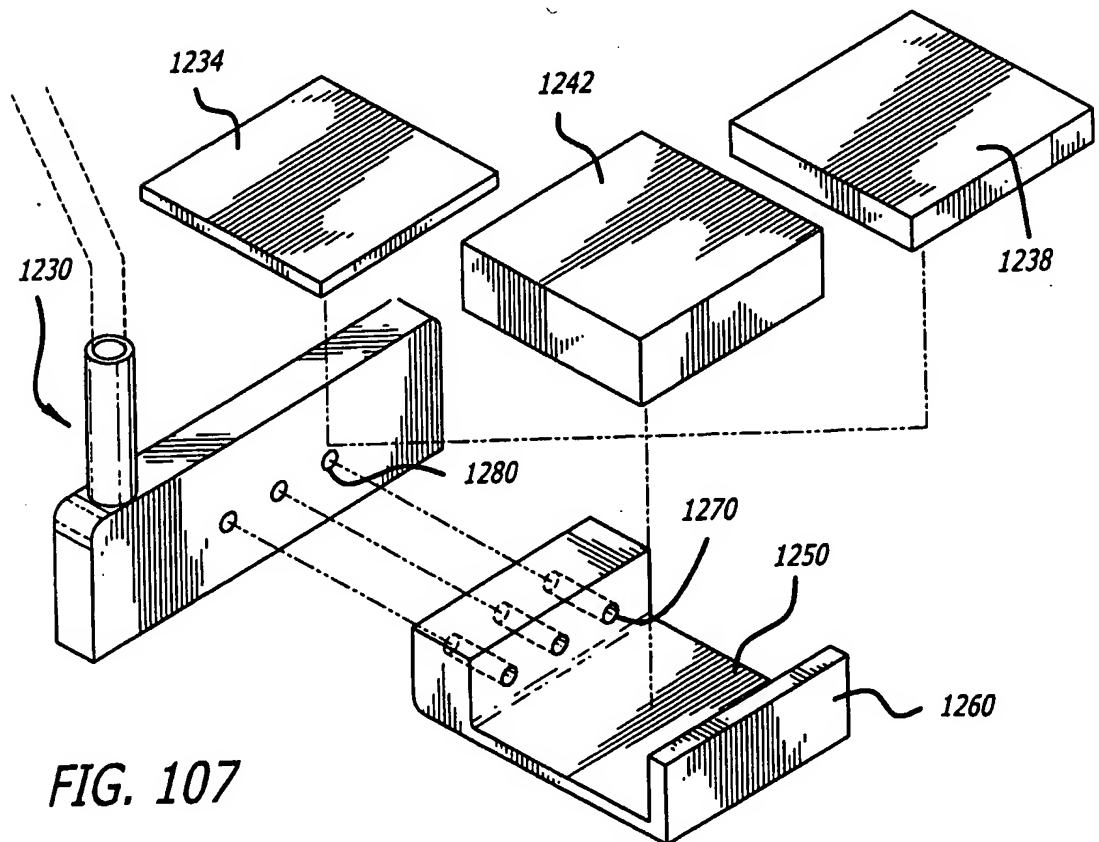
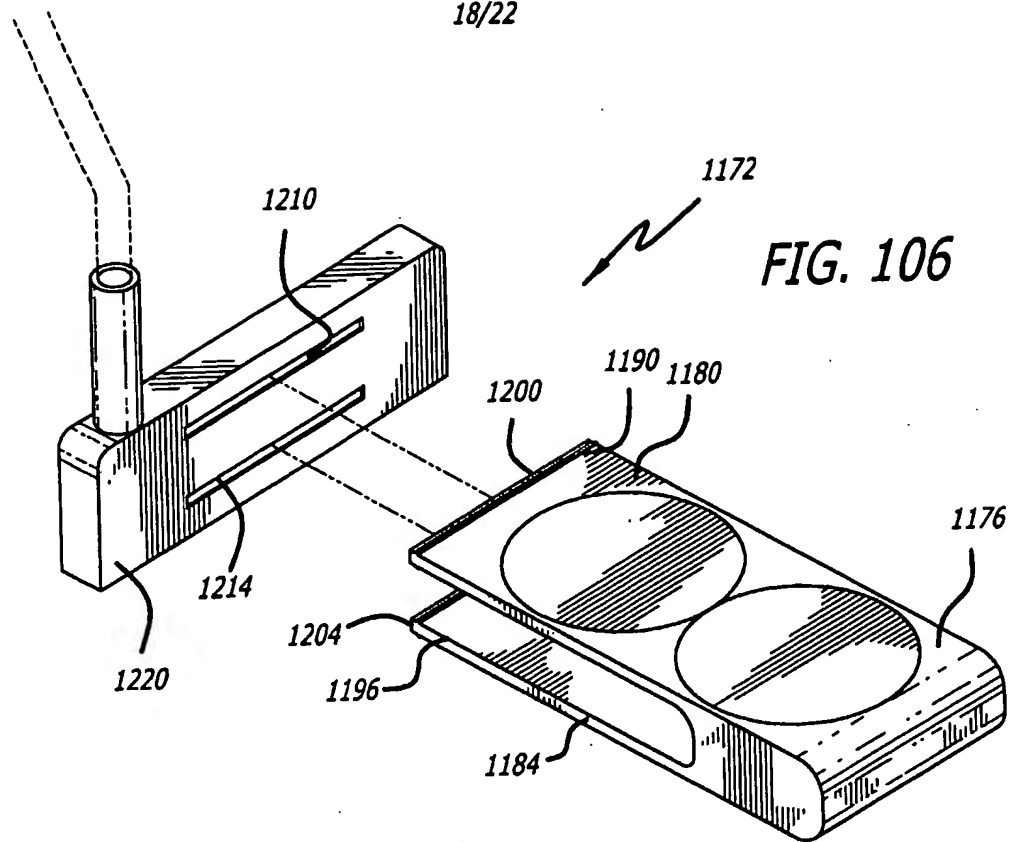


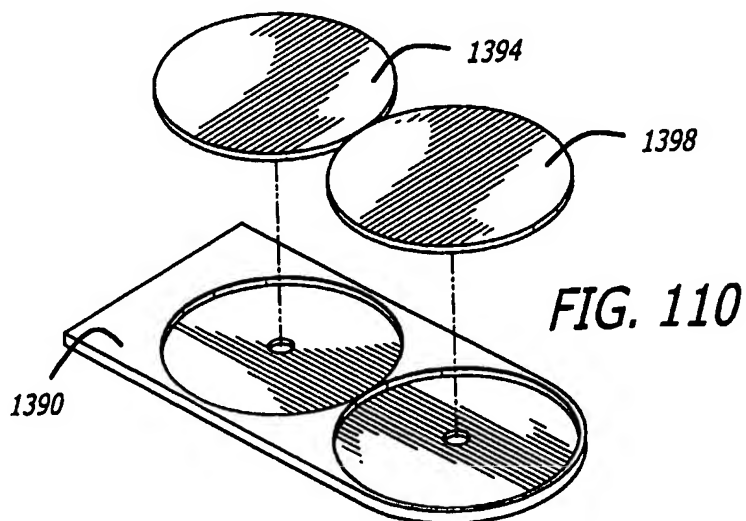
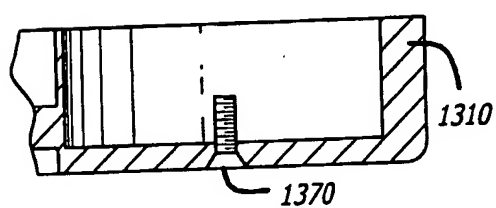
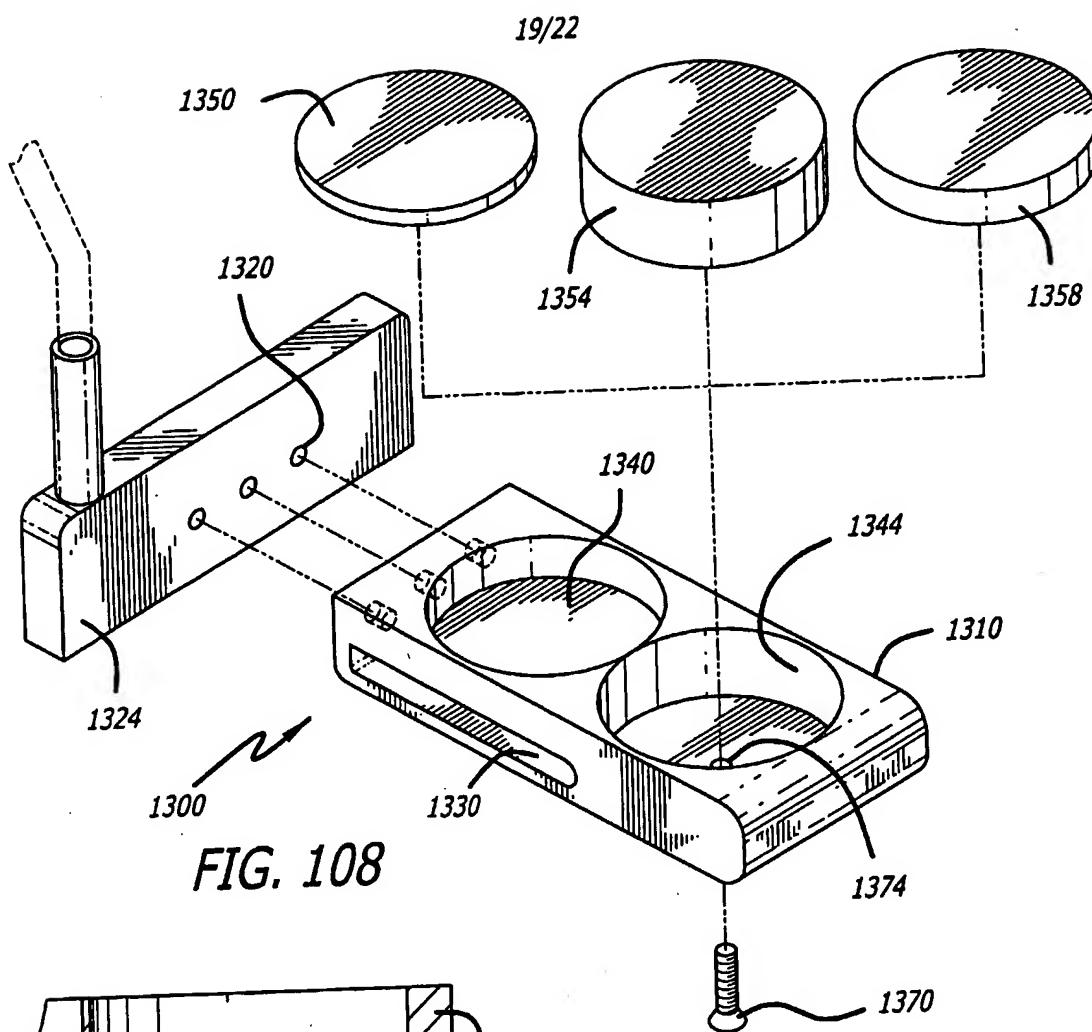
FIG. 103

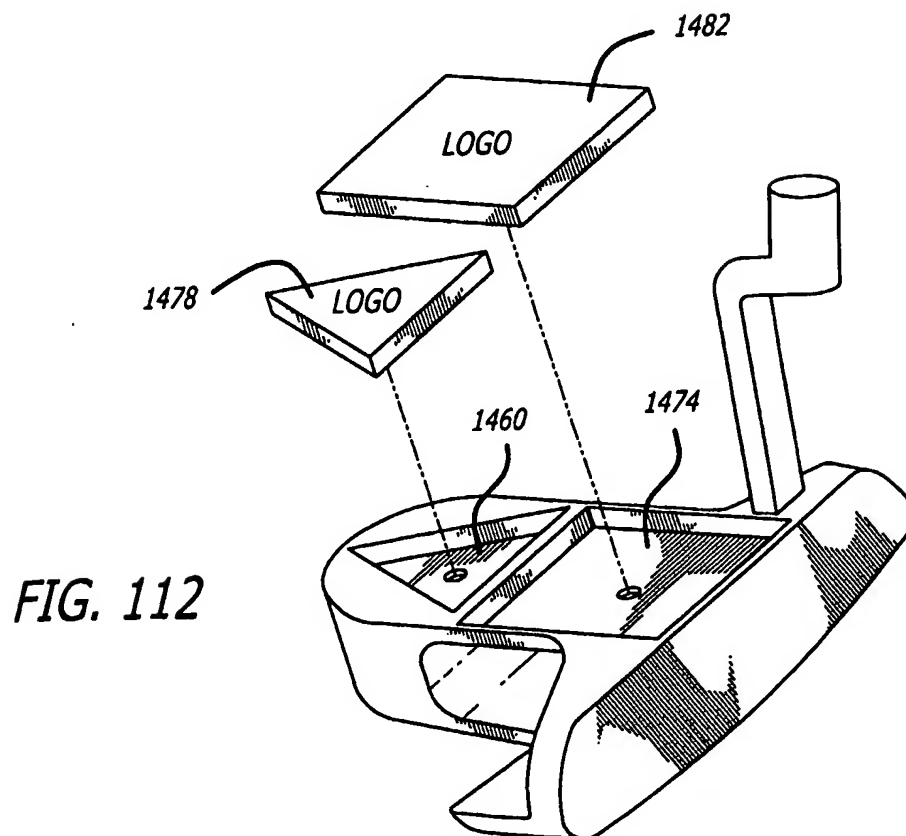
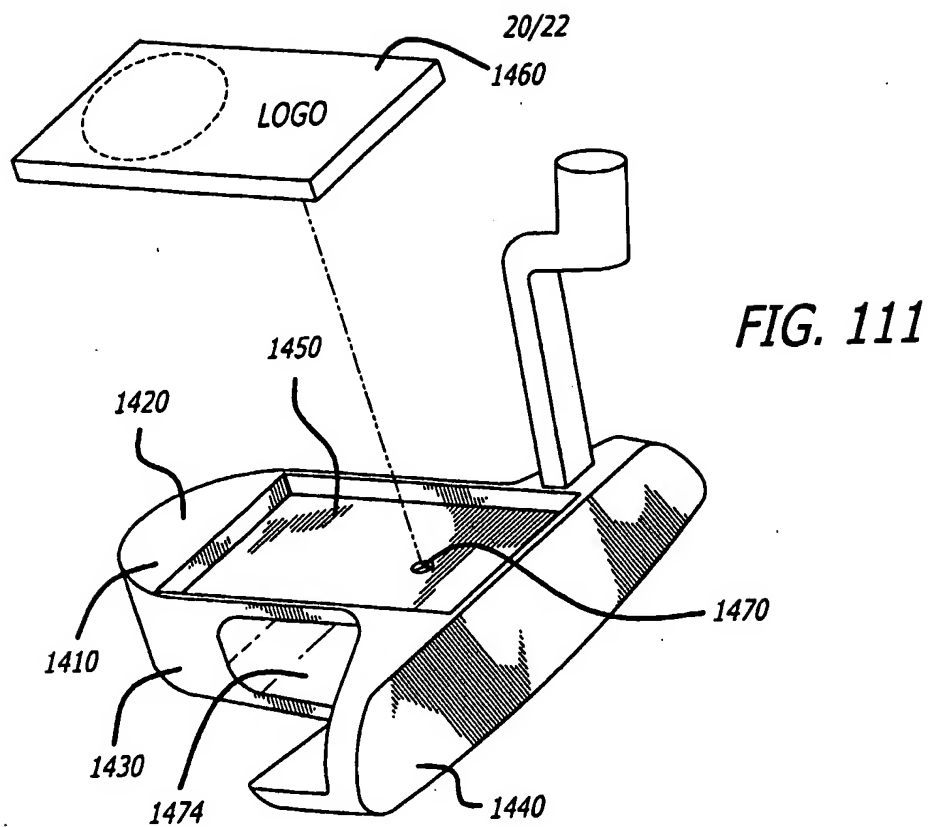
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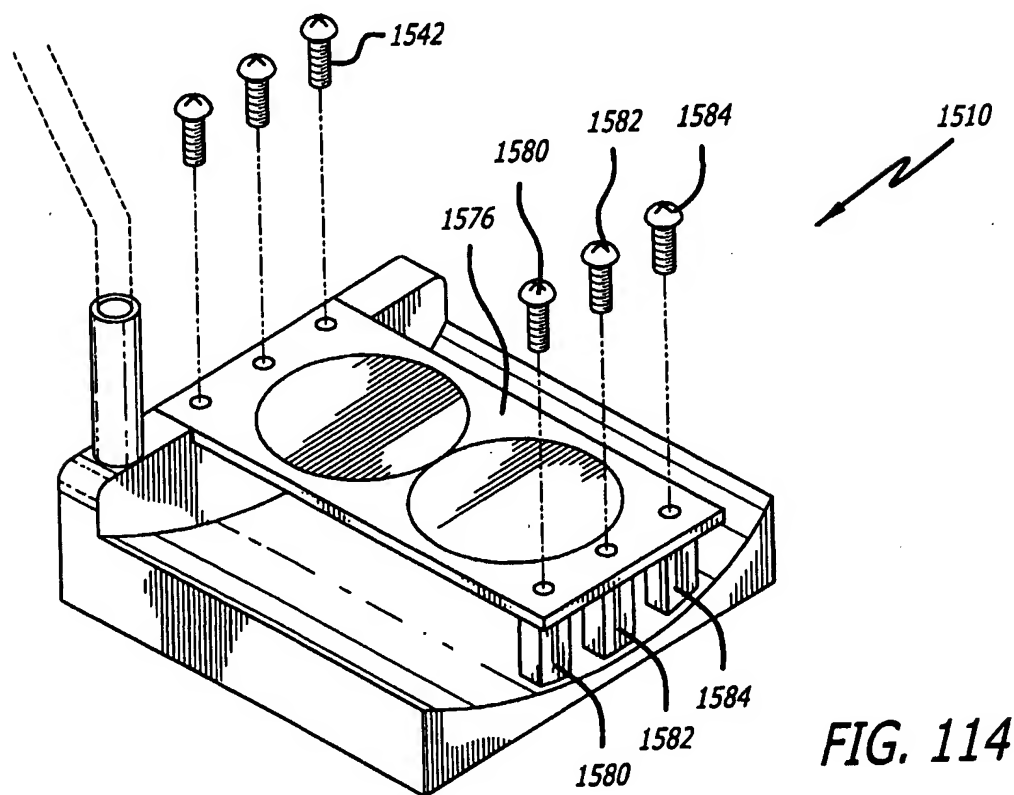
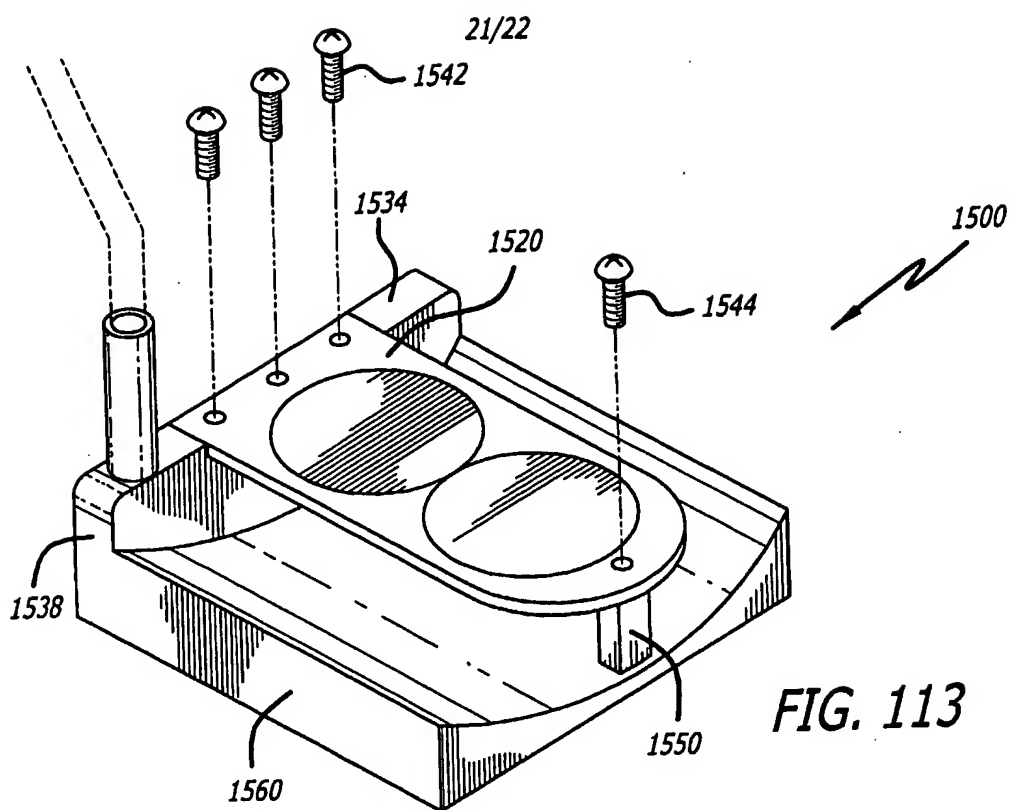


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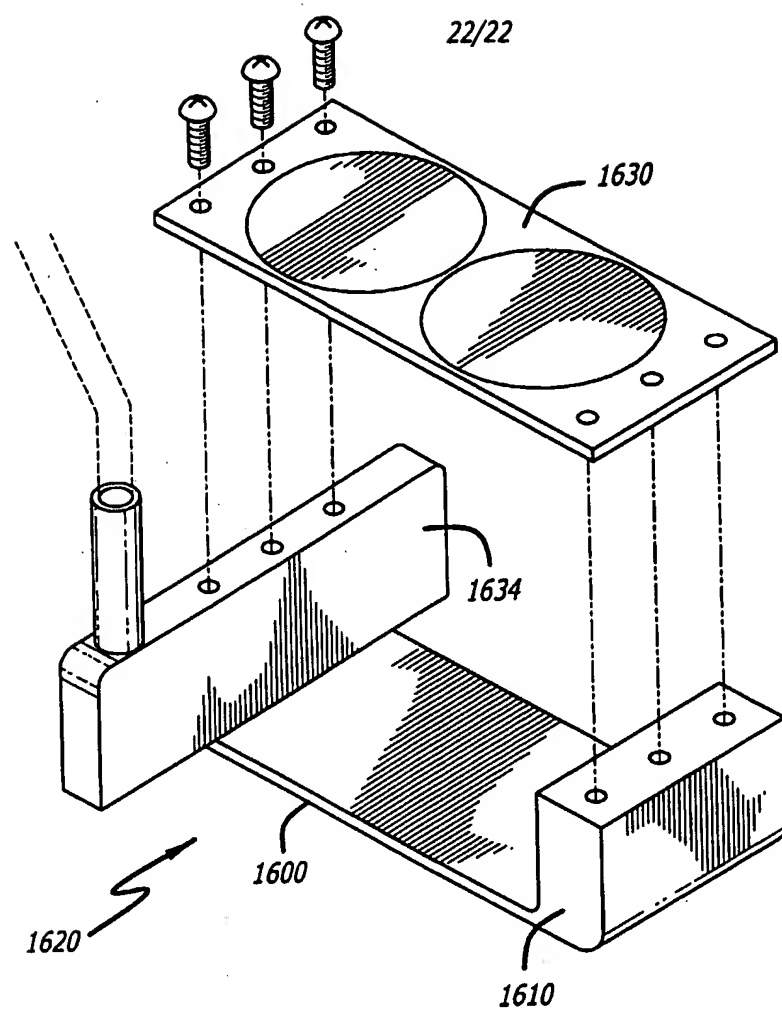


FIG. 115

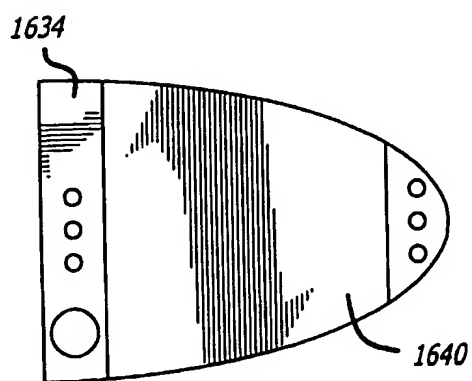


FIG. 116

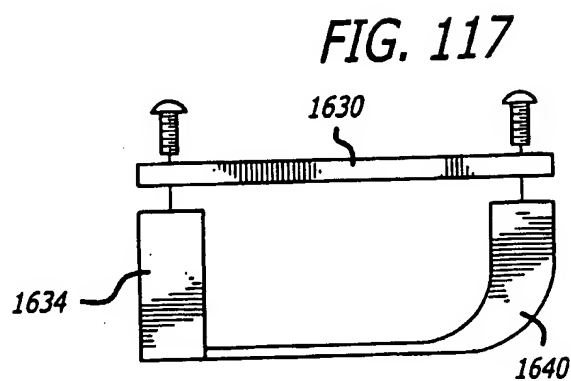


FIG. 117

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/05344

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A63B 69/36

US CL : 473/242, 244, 251

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 473/242, 244, 251, 219-241, 243, 245-250, 252-255, 340, 341; D21/736-746

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,160,142 A (MARSHALL) 03 November 1992 (03.11.1992), column 4, lines 18-46 and column 5, lines 42-59 and Figure 1 and Figures 7-10.	1, 2, 5, 8, 10, 14, 19, 20, 31, 32, 33, 35, 39, 41, 43, 44, 56, 58-64, 66, 67, 69, 70, 71, 73, 82, 86
X	US 3,880,430 A (MCCABE) 29 April 1975 (29.04.1975), column 6, lines 2-54 and Figures 14-15.	1, 2, 7, 8, 9, 31, 32, 33, 35, 39, 55, 56, 58-60, 64, 65, 69
X	US 5,143,376 A (JOHNSON) 01 September 1992 (01.09.1992), column 2, lines 43-66 and column 3, lines 56-68.	1, 2, 11, 13, 19, 27, 29, 32, 33, 34, 39, 55, 64, 71, 111
X	US 2,503,506 A (MILLER) 11 April 1950 (11.04.1950), column 2, line 22 through column 3, line 70.	1, 2, 6-9, 19, 22, 26, 30, 31, 32, 33, 35, 39, 42, 45, 46, 55, 56-65, 69, 70-73, 80-84, 86, 115

☒ Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"A"

document member of the same patent family

Date of the actual completion of the international search

27 June 2005 (27.06.2005)

Date of mailing of the international search report

20 JUL 2005

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Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Sebastiano Passaniti

Telephone No. 703-308-0858

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/05344

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,471,600 A (TANG et al) 29 October 2002 (29.10.2002), column 3, line 54 through column 4, line 24 and Figures 1-2.	112, 113, 114, 116-122, 128, 132, 133, 135
X	US 6,558,268 A (TINDALE) 06 May 2003 (05.06.2003), column 2, line 46 through column 3, line 21.	1, 8, 12, 19, 24, 31, 32, 33, 39, 40
X	US 5,551,695 A (WOLK) 03 September 1996 (03.09.1996), column 6, lines 47-61.	1-3
X	US 5,362,058 A (HONIG) 08 November 1994 (08.11.1994), column 3, lines 28-55 and Figure 1.	1, 2, 15-18, 39, 64, 71
Y		4, 23, 25, 74-77, 87
X	US 4,135,720 A (LANCELLOTTI) 23 January 1979 (23.01.1979), column 2, line 49 through column 6, line 27.	1, 2, 5, 8, 9, 19, 26, 28, 30-33, 37, 39, 46-57, 64, 65, 67, 68, 69, 71, 78-81, 98-100, 105, 106, 115-119, 121, 123, 127, 134
Y		36, 38, 102, 108, 109, 110, 124-127
A	US D248,181 A (CERVANTES) 13 June 1978 (13.06.1978), see Figure 1.	1-135
A	US 3,360,268 A (MOLINARI) 26 December 1967 (26.12.1967), see Figure 1.	1-135

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/05344

Continuation of B. FIELDS SEARCHED Item 3:
EAST
search terms: magnet, golf, screw, alignment, putter

[0163] This invention provides countless options (with alignment indicia design, weight, etc) to the widest range of golfers with their varied preferences. Mallet to blade style putters can all benefit from the addition of the attachable alignment indicators. Design, weight and other variables can be as countless as there are golfers. This will allow the offering to nearly all golfers their preferred embodiment of this invention. Even unique, custom alignment indicators will be possible, giving golfers something that they have been offered in the past.

[0164] Further, the alignment attachment device of this invention can also have "attachments," and some embodiments can be adjusted (weight, length, indicia, etc.)

[0165] Some of the benefits of this invention are summarized below: (1) The alignment indicators can be available in a wide variety of styles and variations to allow each golfer to choose the alignment indicia best suited for their golf game at any given moment. (2) Alignment indicia (device/indicator) are removable and/or re-attachable (both individual alignment indicia or the entire alignment device). (3) Alignment indicia (device/indicator) are interchangeable with other alignment indicia (only one indicia possible vs. unlimited alignment indicia designs with our invention). That is, the alignment device/indicators can be interchangeable. They can be universally interchangeable between/among different manufacturers, or a manufacturer can limit the interchangeability to only its line of putters, or a manufacturer can further limit the interchangeability amongst its own putter product lines and even within specific individual putter models. For example, they may only make five different designs for a certain putter, but those alignment attachment device/indicators may not fit other models of putters they may have. They may do this for any of a number of reasons. One reason is to encourage the customer to purchase the other model putter, if that putter has alignment indicia that his current putter does not offer. Another reason is that the other putter design allows the alignment indicia to have more options such as design and weight. (4) Alignment indicia (device/indicator) have the option of being weighted or weight adjustable.

[0166] From the foregoing detailed description, it will be evident that there are a number of changes, adaptations and modifications of the present invention which come within the province of those skilled in the art. The scope of the invention includes any combination of the elements from the different species or embodiments disclosed herein, as well as subassemblies, assemblies, and methods thereof.

However, it is intended that all such variations not departing from the spirit of the invention be considered as within the scope thereof.

WHAT IS CLAIMED IS:

1. A golf putter alignment attachment assembly, comprising:
an alignment device;
the alignment device including an alignment indicator; and
the alignment device is attachable to a putter in an attached position such that the indicator and thereby the putter can be oriented relative to a golf ball by a golfer to assist the golfer in aiming the ball towards a golf hole during putting.
2. The assembly of claim 1 further comprising a putter connector securable to the putter, and the alignment device being attachable to the putter connector so as to thereby be in the attached position.
3. The assembly of claim 2 wherein the putter connector is securable to the putter with adhesive material.
4. The assembly of claim 2 wherein the putter connector includes a nut.
5. The assembly of claim 2 wherein the alignment device is releasable from the connector and reattachable thereto.
6. The assembly of claim 2 wherein the connector defines a first connector, the alignment device includes a second connector and the second connector is connected to the first connector with the alignment device in the attached position.
7. The assembly of claim 2 wherein the putter connector is manufactured onto the putter head of the putter.
8. The assembly of claim 1 wherein with the alignment device in the attached position, the indicator is oriented on and disposed along a line extending rearward from a golf ball impact center of a putter head of the putter.
9. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on top of a club head of the putter.

10. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on a backside of a club head of the putter.
11. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on a side of a club head of the putter.
12. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on a bottom surface of a club head of the putter.
13. The assembly of claim 1 wherein when the alignment device is in the attached position, the point of attachment of the alignment device is on a shaft of the putter.
14. The assembly of claim 1 wherein the alignment indicator defines an alignment line, and with the alignment device in the attached position, the alignment line is perpendicular to a ball striking face of a club head of the putter.
15. The assembly of claim 1 further comprising retail packaging holding the alignment device, the packaging being separate from the putter.
16. The assembly of claim 15 further comprising a putter connector held in the packaging.
17. The assembly of claim 16 wherein the putter connector is securable to the putter, and the alignment device is attachable to the putter connector and thereby in the attached position.
18. The assembly of claim 17 wherein the alignment device includes a connector for the putter connector.
19. The assembly of claim 1 further comprising attaching means for attaching the alignment device in the attached position to the putter.
20. The assembly of claim 19 wherein the attaching means includes a magnet.

21. The assembly of claim 20 wherein the magnet is attached to the alignment device, and the attaching means further includes a metal connector attachable to the putter and adapted to magnetically adhere the magnet such that the alignment device is in the attached position.
22. The assembly of claim 19 wherein the attaching means includes a tongue-and-groove arrangement.
23. The assembly of claim 19 wherein the attaching means includes a plurality of screws.
24. The assembly of claim 19 wherein the attaching means includes a screw.
25. The assembly of claim 19 wherein the attaching means includes an angled post disposable in an angled slot such that the alignment device is in the attached position.
26. The assembly of claim 19 wherein the attaching means includes a slide mount mountable to the putter and adapted to receive therein an end of the alignment device.
27. The assembly of claim 19 wherein the attaching means attaches the alignment device to a shaft of the putter.
28. The assembly of claim 19 wherein the attaching means includes a first attaching means for attaching the alignment device in a first attached position to the putter and an alternative second attaching means for attaching an alternative second alignment device in a different alternative second position to the putter.
29. The assembly of claim 19 wherein the attaching means allows for the attachment of the alignment device in alternative locations on the putter as selected by the golfer.
30. The assembly of claim 19 wherein the attaching means includes a putter connector member attached to the putter and to which the alignment device is releasably securable.

31. The assembly of claim 1 wherein the alignment indicator includes alignment indicia.
32. The assembly of claim 1 wherein the alignment indicator includes the shape of the alignment device.
33. The assembly of claim 1 wherein the alignment indicator is oriented longitudinally on the alignment device.
34. The assembly of claim 1 wherein at least a portion of the alignment indicator is removable from the alignment device.
35. The assembly of claim 1 wherein the alignment device includes a plate member which when in the attached position extends out from a club head of the putter and disposed perpendicular to the face of the club head.
36. The assembly of claim 35 wherein the plate member is approximately 3¼ inches long, 1¼ inches wide and 3/16 inch deep, for example.
37. The assembly of claim 1 wherein the alignment device has a wedge shape with first and second angled surfaces.
38. The assembly of claim 37 wherein the first and second angled surfaces have different colors.
39. A golf putter alignment attachment assembly, comprising:
an alignment device; and
attaching means for attaching the alignment device to a putter in an attached alignment position such that the alignment device assists a golfer in orienting the golfer's putter relative to a golf ball to assist in aiming the ball during putting.
40. The assembly of claim 39 wherein the attaching means includes at least one screw.
41. The assembly of claim 39 wherein the attaching means is a magnetic attaching means.

42. The assembly of claim 39 wherein the attaching means is a male-female connection.
43. The assembly of claim 39 wherein the attaching means allows the golfer to attach the alignment device to the putter.
44. The assembly of claim 39 wherein the attaching means is a releasable attaching means such that the golfer can remove the alignment device from the putter after attaching it thereto.
45. The assembly of claim 39 wherein the attaching means includes a connector which is attached to the putter and to which the alignment device is attached when in the attached position.
46. The assembly of claim 45 wherein the connector defines a first connector and the alignment device includes a second connector which is connected to the first connector when the alignment device is in the attached alignment position.
47. The assembly of claim 46 wherein the alignment device includes a top flat piece and the second connector is secured to a lower surface of the top flat piece.
48. The assembly of claim 1 wherein the alignment device includes a top flat piece and the connector is secured to a lower surface of the top flat piece.
49. The assembly of claim 48 wherein the alignment device has an alignment axis to assist the golfer in visually aligning the putter.
50. The assembly of claim 49 wherein the alignment axis is a central longitudinal axis of the alignment device.
51. The assembly of claim 50 wherein in a plan view the alignment device is symmetrical about the central longitudinal axis.
52. The assembly of claim 49 wherein the alignment axis is defined at least in part by the shape of the alignment device.
53. The assembly of claim 49 wherein the alignment device has a tongue shape.

54. The assembly of claim 49 wherein the alignment axis is defined at least in part by an indicator on the alignment device.
55. A golf putter assembly including a golf putter having a shaft and a club head, the improvement comprising:
an alignment device removably attachable to the club head in an attached alignment position such that the alignment device assists the golfer in orienting the putter relative to a golf ball to assist in aiming the ball during putting.
56. The assembly of claim 55 wherein the alignment device includes a flat surface, the alignment device when in the attached alignment position includes the flat surface extending outwardly from the club head and generally perpendicular to the club head face.
57. The assembly of claim 55 further comprising a first connector attachable to the putter, the alignment device including a second connector, and the first and second connectors being connected together when the alignment device is in the attached alignment position.
58. The assembly of claim 55 wherein the alignment device defines a ball alignment axis.
59. The assembly of claim 58 wherein the alignment axis is defined at least in part by the shape of the alignment device.
60. The assembly of claim 58 wherein the alignment device includes a top surface alignment indicator, and the alignment axis is defined at least in part by the alignment indicator.
61. The assembly of claim 55 wherein the alignment device is removably attachable to the putter by a manufacturer of the golf putter.
62. The assembly of claim 55 wherein the alignment device is removably attachable to the putter by the golfer.

63. The assembly of claim 62 wherein the putter when obtained by the golfer and before the alignment device is attached, is pre-built or pre-fit to accept the alignment device when attached thereto by the golfer.
64. A putting method, comprising:
attaching an alignment assembly to a putter club head in an attached alignment position and orientation; and
with the device in the attached alignment position and orientation and visually using an alignment indicator of the assembly, orienting the putter relative to a golf ball to assist a golfer in aiming the ball toward a golf hole during putting.
65. The method of claim 64 wherein the attaching includes attaching the alignment assembly to a top surface of the club head.
66. The method of claim 64 wherein the attaching includes attaching the alignment assembly to a rearwardly disposed face of a club head of the putter.
67. The method of claim 64 further comprising removing the alignment assembly from the putter.
68. The method of claim 67 wherein the alignment assembly defines a first alignment assembly, and further comprising after the removing, attaching a second alignment assembly to the putter.
69. The method of claim 64 wherein the device, when in the attached alignment position and orientation, extends out from the club head and is disposed perpendicular to the face of the club head.
70. The method of claim 64 wherein the attaching includes attaching the alignment assembly to the club head such that the alignment assembly extends rearwardly from a blade portion of the club head.
71. A putting alignment attachment assembly, comprising:
an alignment device;
alignment indicator supported by the device; and
attaching means for attaching the alignment device to a club head of a putter

such that the indicator and thereby the putter can be visually oriented relative to a golf ball by a golfer to assist the golfer in aiming the golfer's putt and for allowing the alignment device to be subsequently detached from the club head.

72. The assembly of claim 71 wherein the attaching means includes a tongue extending forwardly from the alignment device and adapted to fit into and be held in a slot on a rear face of the club head.

73. The assembly of claim 71 wherein the attaching means removably attaches the alignment device to a rear face of a blade portion of the club head.

74. The assembly of claim 73 wherein the attaching means includes a screw adapted to screw the alignment device to the rear face.

75. The assembly of claim 74 wherein the attaching means includes at least one nut into which the screw threads.

76. The assembly of claim 74 wherein the alignment device includes a forward downwardly-depending flange having an opening for receiving the screw therein.

77. The assembly of claim 74 wherein the screw is adapted to screw into a pre-formed screw hole in the rear face.

78. The assembly of claim 71 wherein the attaching means attaches the alignment device to a blade portion of the club head such that the alignment device extends rearwardly over a mallet body portion of the club head.

79. The assembly of claim 71 wherein the attaching means attaches the alignment device to a blade portion of the club head such that the alignment device extends rearwardly over an upper channel of a mallet body portion of the club head.

80. The assembly of claim 71 wherein the attaching means attaches the alignment device on and to a recess on a top surface of the club head.

81. The assembly of claim 80 wherein the top surface is on a blade portion of the club head.

82. The assembly of claim 71 wherein the alignment device includes a forward surface, and the attaching means attaches the forward surface to a rearward surface of the club head.
83. The assembly of claim 82 wherein the forward surface is on a front plate of the alignment device.
84. The assembly of claim 83 wherein the alignment device includes a top plate and the front plate is secured to and extends downwardly from the top plate.
85. The assembly of claim 84 wherein the alignment device includes a bottom plate and the front plate is secured to and extends downwardly from the bottom plate.
86. The assembly of claim 82 wherein the rearward surface is a rearward surface of a blade portion of the club head.
87. The assembly of claim 71 wherein the attaching means includes a plurality of screws.
88. The assembly of claim 71 wherein the attaching means includes first attaching means for attaching a forward portion of the alignment device to a blade portion of the club head and second attaching means for attaching a rearward portion of the alignment device to a mallet body portion of the club head.
89. The assembly of claim 88 wherein the second attaching means includes a spacer member which spaces the rearward portion above the mallet body portion.
90. The assembly of claim 89 wherein the second attaching means includes a connector which passes through the rearward portion, the spacer member and into the mallet body portion.
91. The assembly of claim 90 wherein the connector is a screw.
92. The assembly of claim 89 wherein the spacer member defines a first spacer member, and the second attaching means includes a second spacer member.

93. The assembly of claim 88 wherein the first attaching means attaches a bottom surface of the forward portion to a top surface of the blade portion.
94. The assembly of claim 88 wherein a rearward portion of the mallet body portion is higher than a forward portion of the mallet body portion, and the second attaching means attaches the rearward portion of the alignment device to the rearward portion of the mallet body portion.
95. The assembly of claim 94 wherein the attaching means attaches the alignment device such that the alignment device extends over the forward portion of the mallet body portion.
96. The assembly of claim 94 wherein the rearward portion of the mallet body portion has an opening, and the second attaching means includes a connector member for passing through the rearward portion of the alignment device into the opening.
97. The assembly of claim 95 wherein the connector member is a screw.
98. The assembly of claim 71 wherein the alignment device includes a receiving area, and the indicator includes an indicator member releasably attachable to the receiving area and a different alternative indicator member releasably attachable to the receiving area with the indicator member removed from the receiving area.
99. The assembly of claim 98 wherein the receiving area includes a recess and the indicator member and the alternative indicator members are both configured to fit in the recess.
100. The assembly of claim 98 wherein the alternative indicator member is heavier or lighter than the indicator member to provide a different weighting effect on the club head.
101. The assembly of claim 100 wherein the alternative indicator member or the indicator member plus the alternative indicator member weigh approximately five to fifty grams.

102. The assembly of claim 100 wherein the indicator includes screw means for alternatively attaching the alternative indicator member or the indicator member to the receiving area.
103. The assembly of claim 100 wherein the indicator member is made of a first material and the alternative indicator member is made of a second material heavier or lighter than the first material.
104. The assembly of claim 100 wherein the indicator member has a first thickness and the alternative indicator member has a second thickness different than the first thickness and thereby has a different weight.
105. The assembly of claim 71 wherein the alignment device includes a recess and the indicator includes a first indicator member and a second indicator member, the first and second indicator members being alternatively attachable in the recess.
106. The assembly of claim 105 wherein the first and second indicator members have different indicators thereon.
107. The assembly of claim 105 wherein the first and second indicator members have different weights providing for different club head weighting effects.
108. The assembly of claim 71 wherein the attaching means includes a forward edge of the alignment device adapted to be snap-fit attached in a rearwardly disposed slot of the club head.
109. The assembly of claim 108 wherein the forward edge defines a first forward edge and the slot defines a first slot, and the attaching means includes a second forward edge of the alignment device adapted to be snap fit attached in a rearwardly disposed second slot of the club head.
110. The assembly of claim 71 wherein the attaching means includes a tongue extending forwardly from the alignment device and adapted to fit into and be held in a slot on a rear face of the club head.
111. The assembly of claim 71 wherein at least a portion of the indicator is removable from the alignment device for replacement purposes.

112. The assembly of claim 71 wherein a first portion of the indicator is removable from the alignment device and a second portion of the indicator is separately removable from the alignment device.
113. The assembly of claim 112 wherein the first portion is a first disc.
114. The assembly of claim 113 wherein the second portion is a second disc.
115. The assembly of claim 71 wherein the assembly weighs between a few grams and approximately 250-300 grams.
116. A golf putter head, comprising:
a blade portion;
a mallet body portion extending rearwardly from the blade portion; and
a recessed receiving area on an upper surface of at least one of the blade portion and the mallet body portion.
117. The golf putter head of claim 116 further comprising a member positionable in the recess area.
118. The golf putter head of claim 117 wherein the member is metal or plastic.
119. The golf putter head of claim 117 wherein the member has identifier indicia on a top surface thereof.
120. The golf putter head of claim 117 wherein the member has putter-golf ball alignment indicia thereon.
121. The golf putter head of claim 117 wherein the member has an identifier indicia shape.
122. The golf putter head of claim 117 wherein the member has a putter-ball alignment shape.
123. The golf putter head of claim 117 further comprising attaching means for releasably attaching the member in the receiving area.

124. The golf putter head of claim 123 wherein the attaching means includes a screw.

125. The golf putter head of claim 121 wherein the mallet body portion includes a hollow area providing access to screw the screw up into the recessed area and into the member.

126. The golf putter head of claim 123 wherein the attaching means includes a male-female connection.

127. The golf putter head of claim 123 wherein the attaching means includes a sliding rail-groove connection.

128. The golf putter head of claim 116 further comprising the recessed receiving area defining a first recessed receiving area, and a second recessed receiving area on an upper surface of the mallet body portion and proximate to the first recessed area.

129. The golf putter head of claim 128 wherein the first receiving area is adapted to receive therein a first member of a first shape and the second receiving area is adapted to receive therein a second member of a different second shape.

130. The golf putter head of claim 129 wherein the first member is a square having side lengths of approximately 4.5 centimeters and the second member is an equilateral triangle having side lengths of approximately 4.5 centimeters.

131. The golf putter head of claim 129 wherein the first and second members both have thicknesses of approximately 1/8 centimeter.

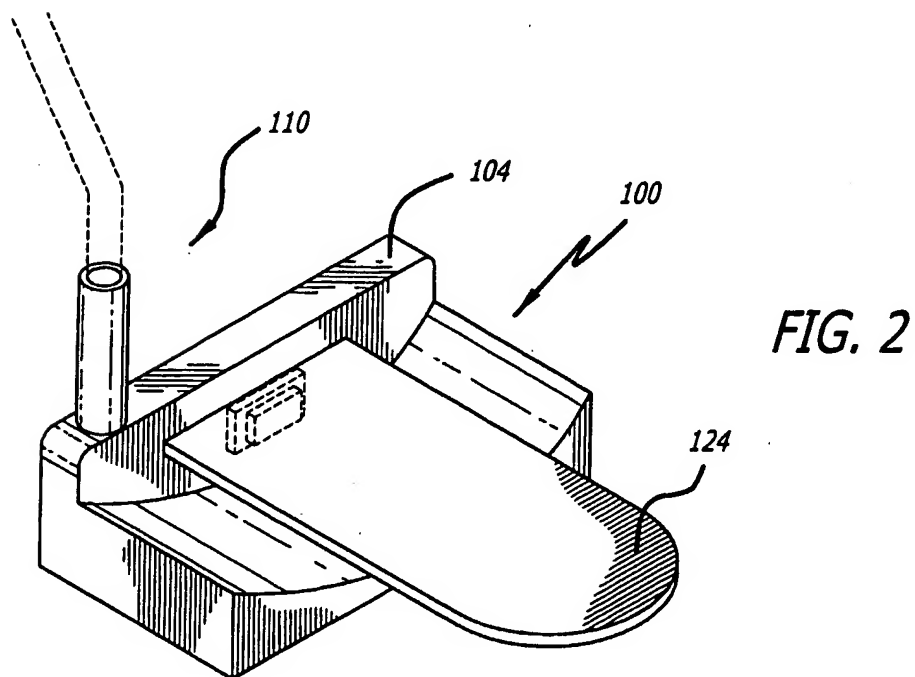
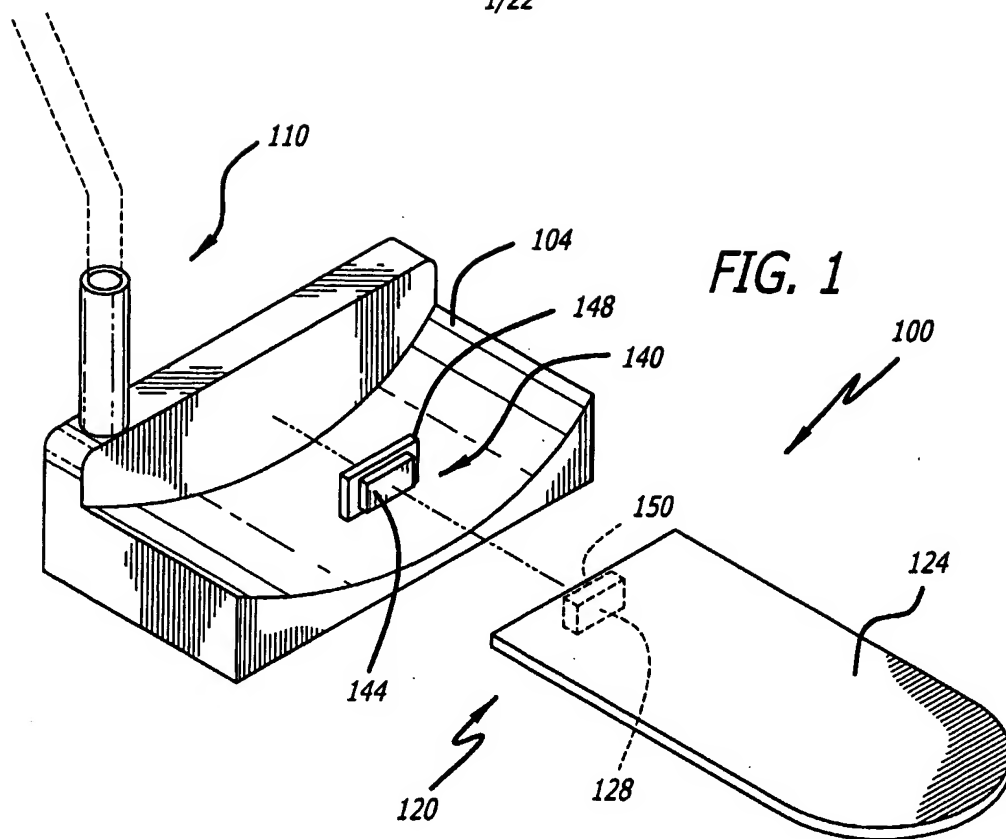
132. The golf putter head of claim 128 wherein the first and second recessed receiving areas are aligned in a line perpendicular to a putting face of the blade portion.

133. The golf putter head of claim 116 further comprising a hosel extending up from the blade portion.

134. The golf putter head of claim 116 further comprising a hosel extending up from the mallet body portion.

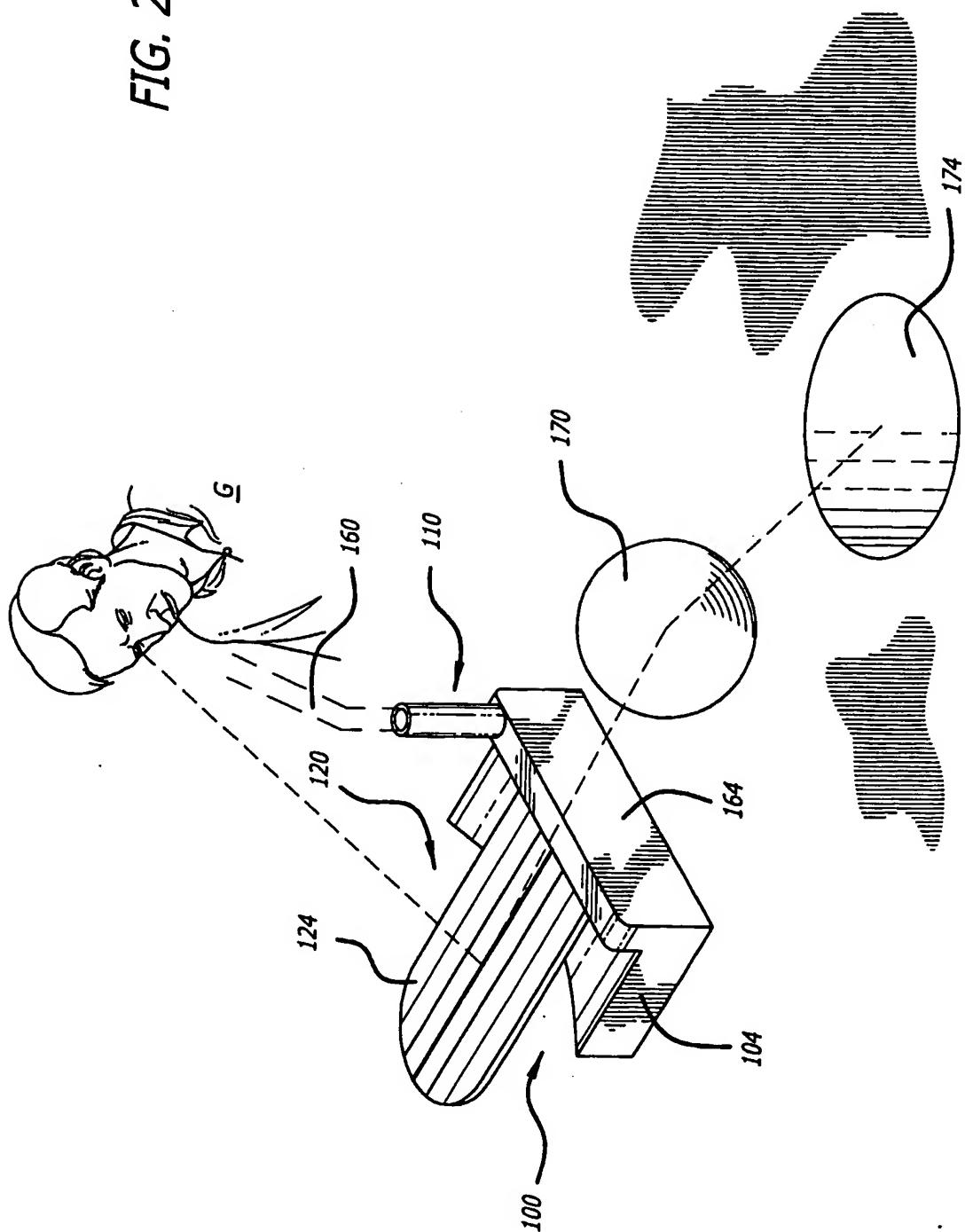
135. The golf putter head of claim 116 wherein the blade portion and the mallet body portion are formed as a single unitary member.

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FIG. 2A



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FIG. 3

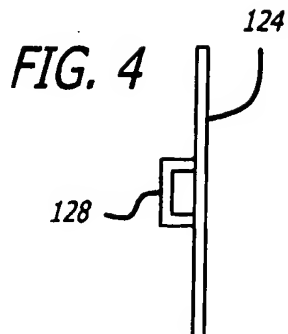
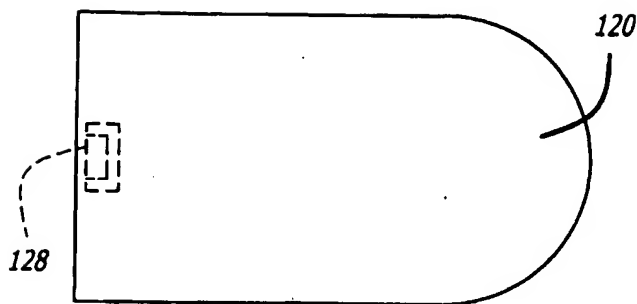


FIG. 5

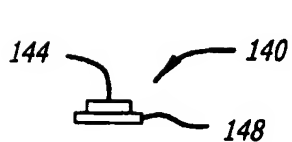
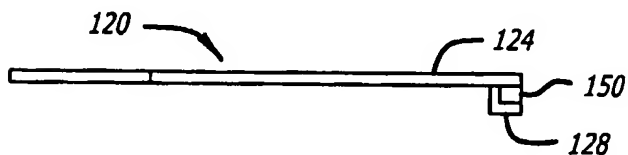


FIG. 6



FIG. 7



FIG. 8

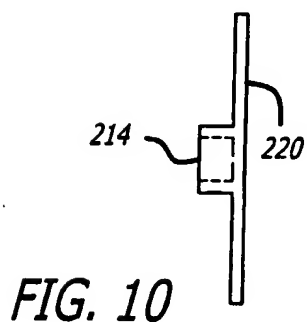


FIG. 10

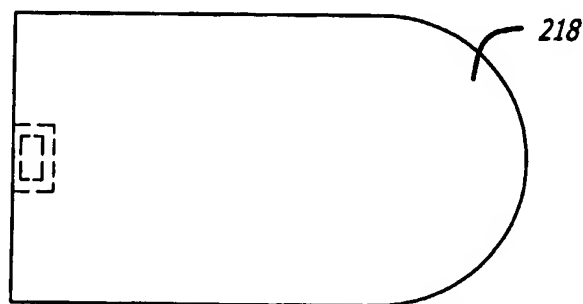


FIG. 9

FIG. 11

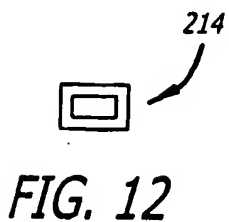
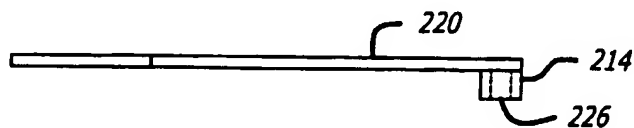


FIG. 12

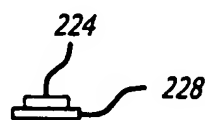


FIG. 13

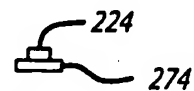


FIG. 14

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FIG. 15

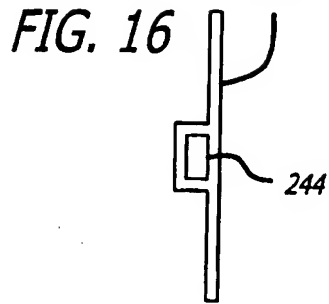
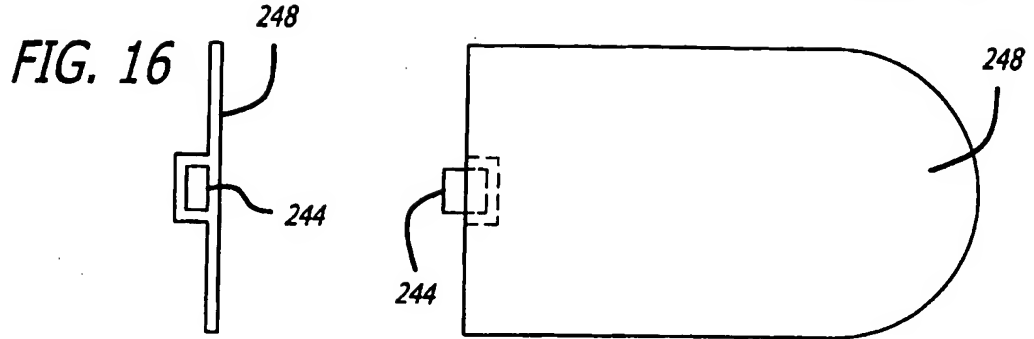


FIG. 17

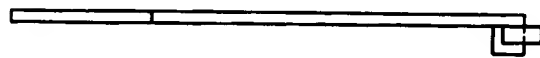


FIG. 18

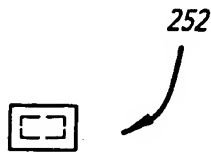


FIG. 19

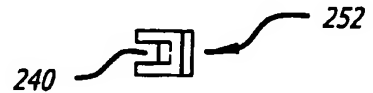


FIG. 20

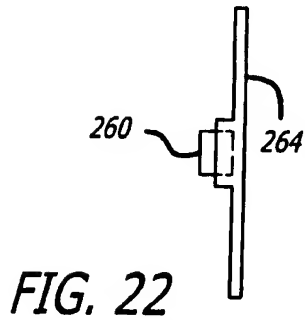


FIG. 22

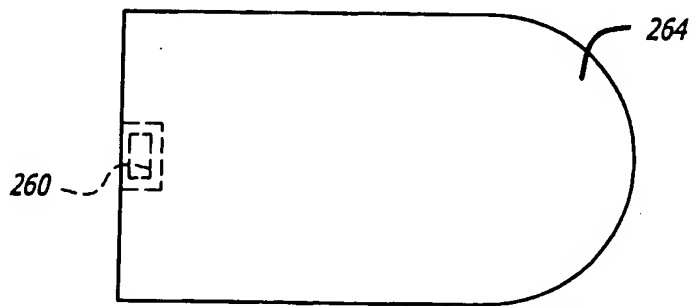


FIG. 21

FIG. 23

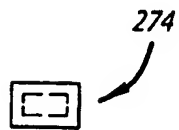
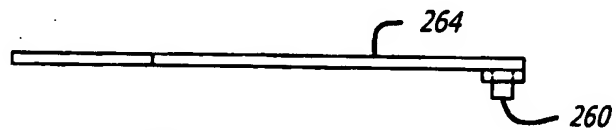


FIG. 24



FIG. 25



FIG. 26

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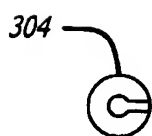
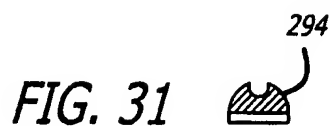
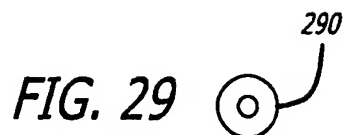
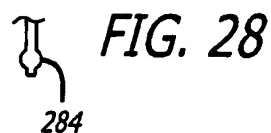
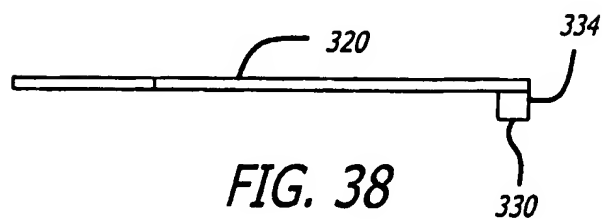
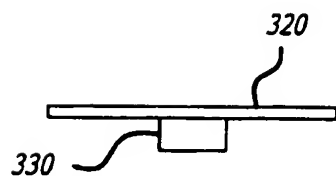
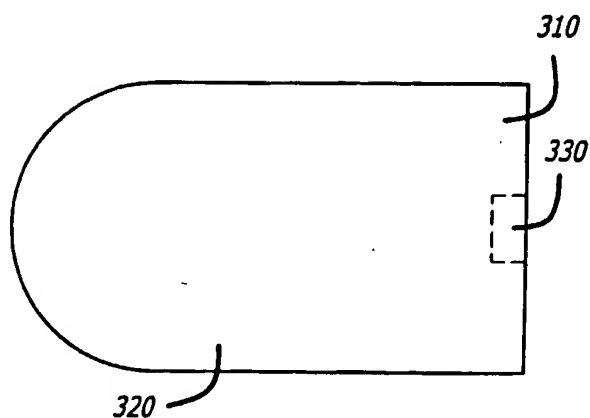


FIG. 36



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FIG. 39

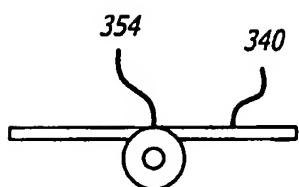
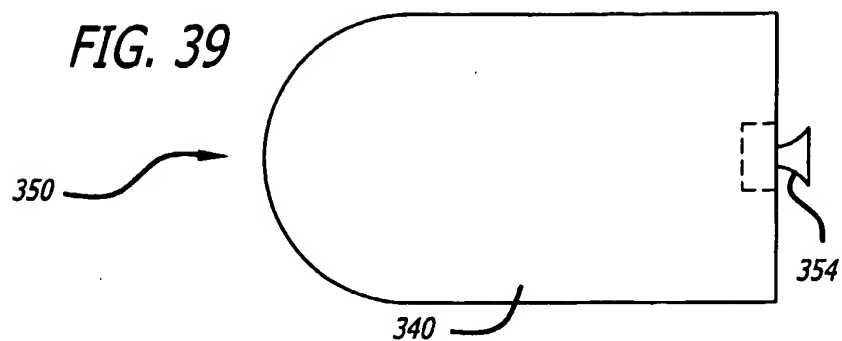


FIG. 40

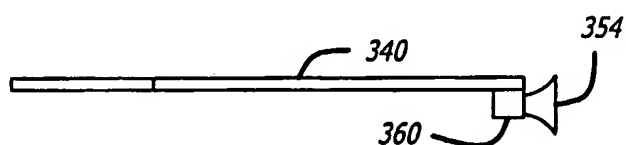


FIG. 41

FIG. 42

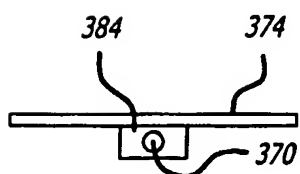
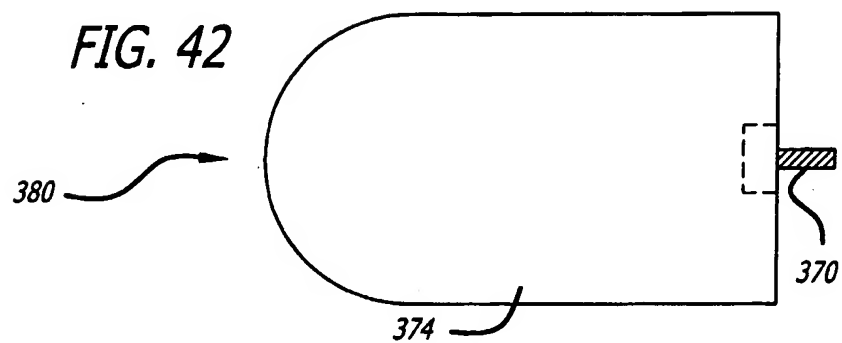


FIG. 43

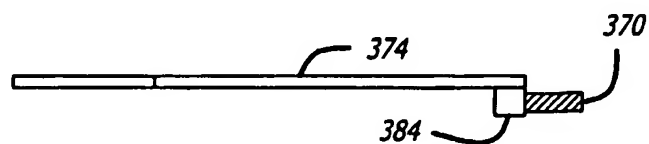
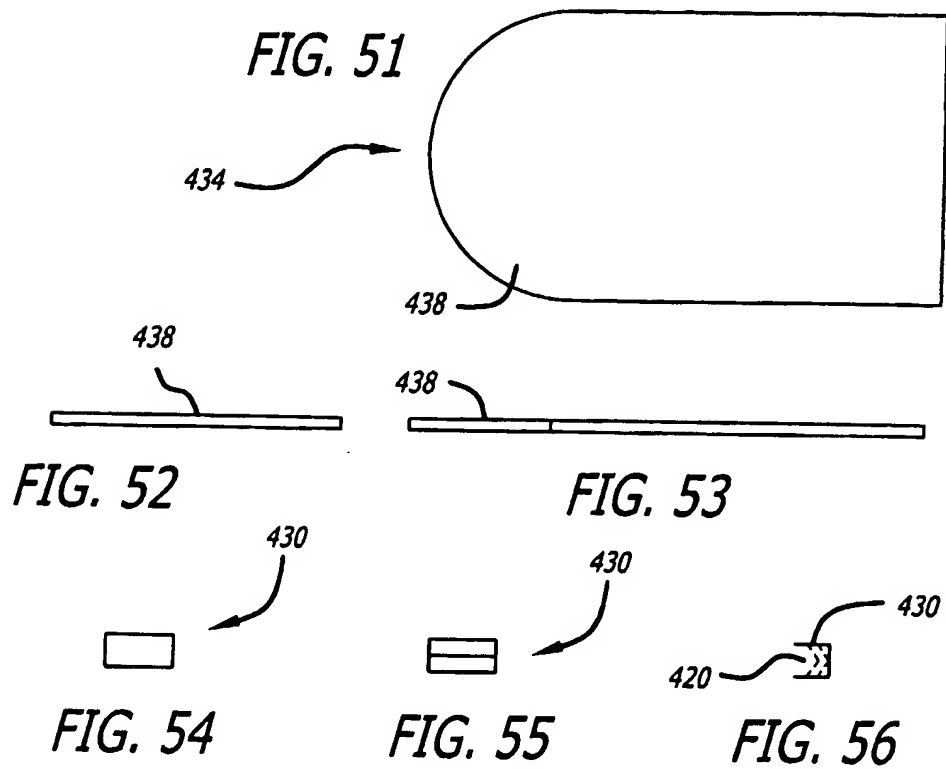
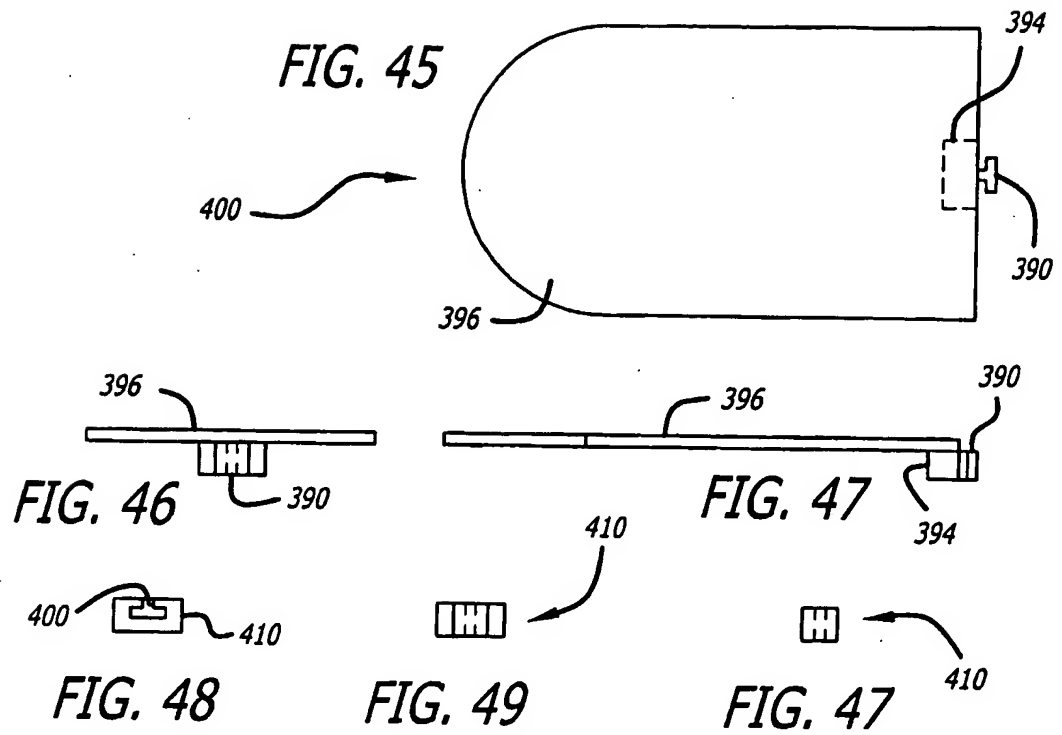
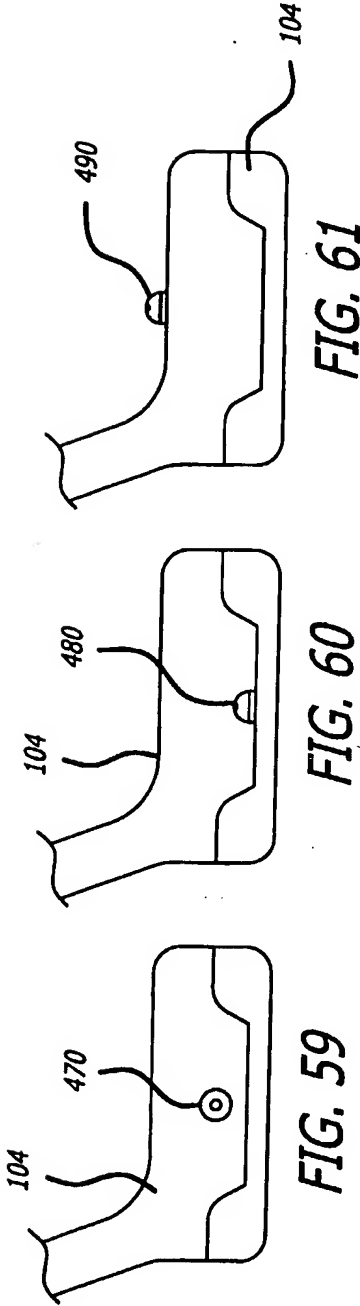
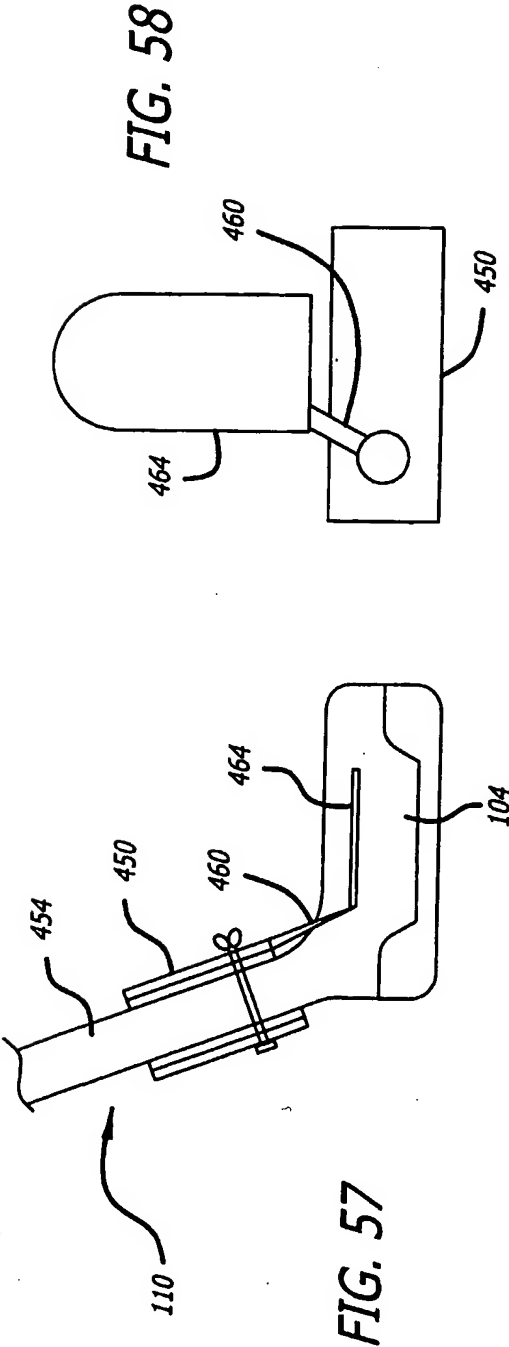


FIG. 44

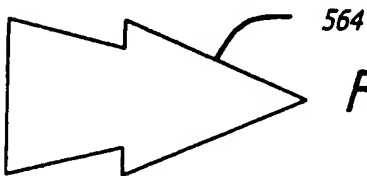
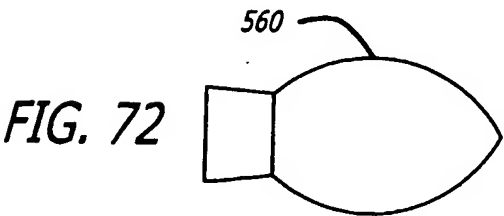
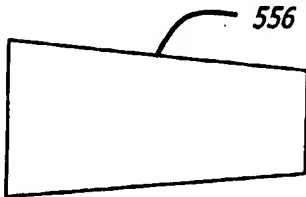
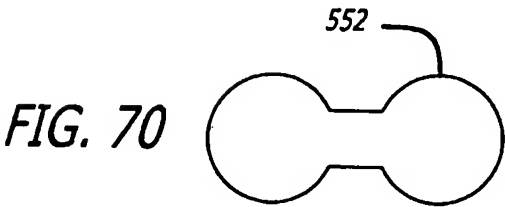
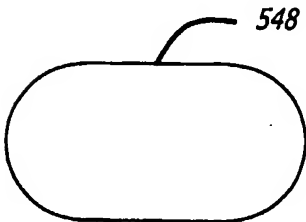
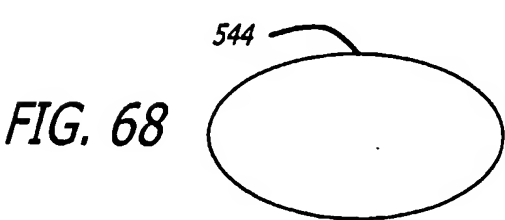
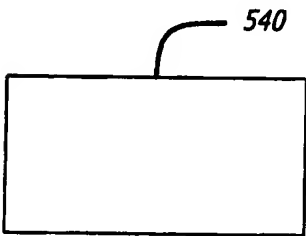
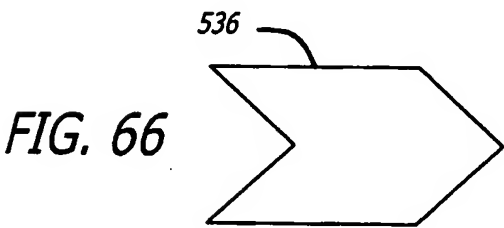
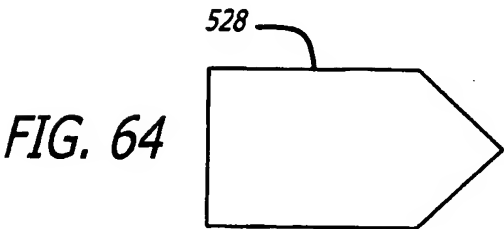
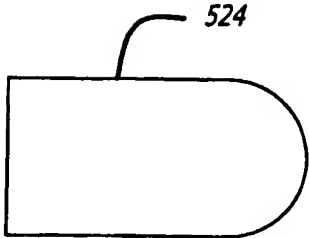
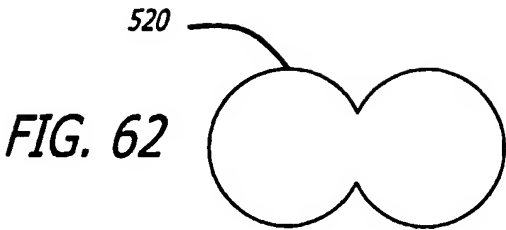
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FIG. 74



FIG. 75

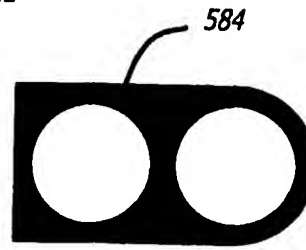


FIG. 76

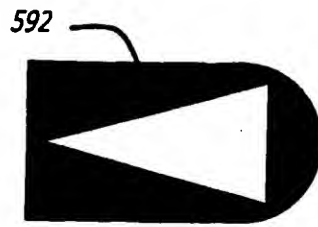


FIG. 77

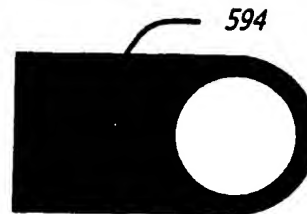


FIG. 78

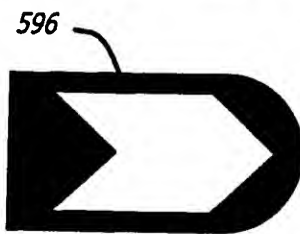


FIG. 79

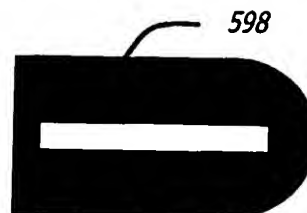


FIG. 80

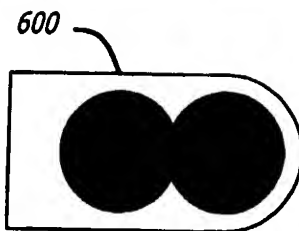


FIG. 81

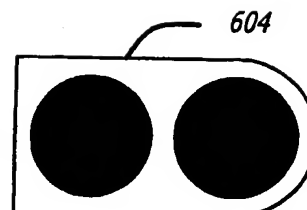


FIG. 82

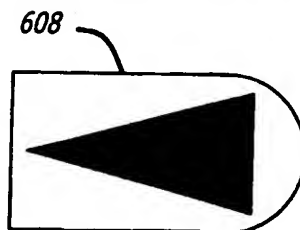


FIG. 83

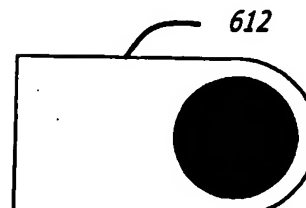


FIG. 84

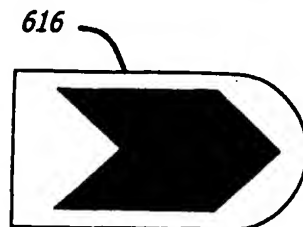
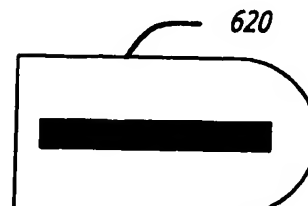


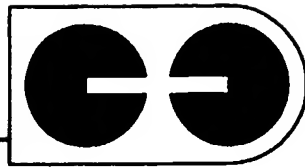
FIG. 85



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FIG. 86

630



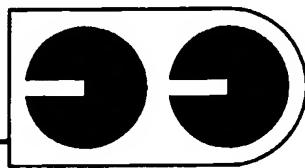
634

FIG. 87



FIG. 88

638



642

FIG. 89



FIG. 90

646



650

FIG. 91

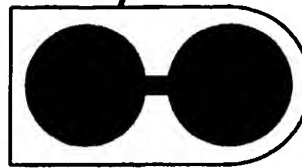


FIG. 92

520

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500

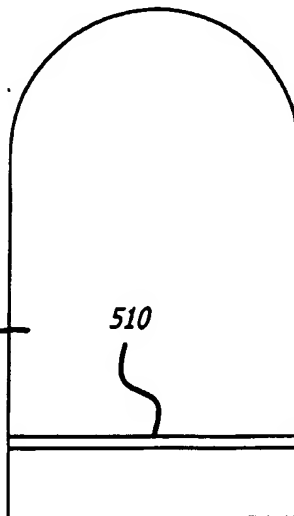


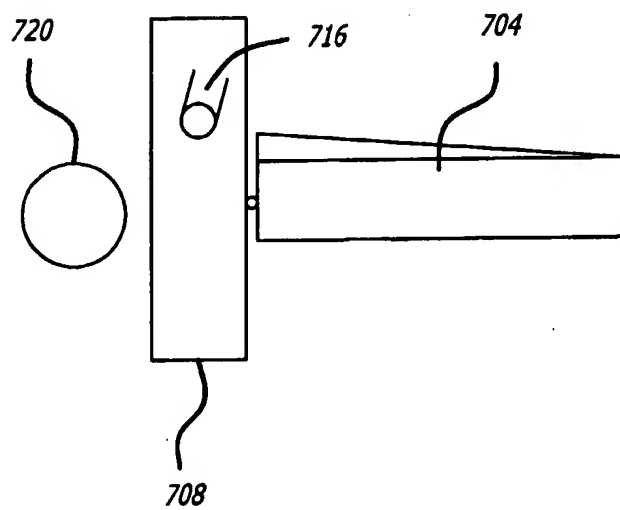
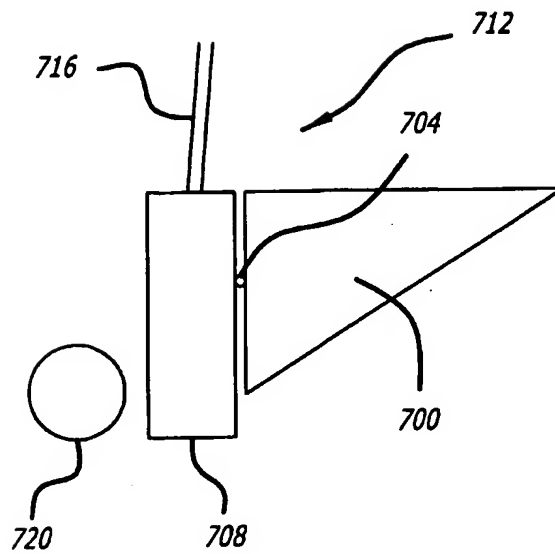
FIG. 93

520

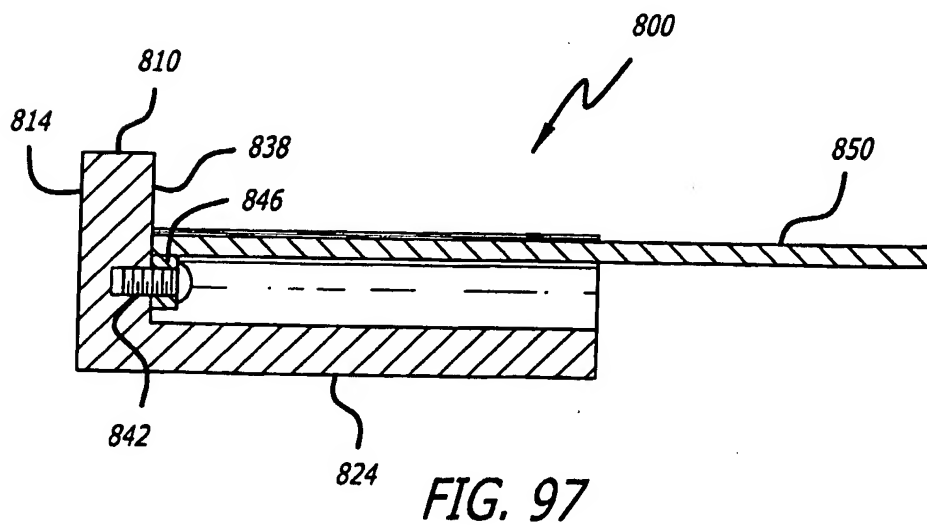
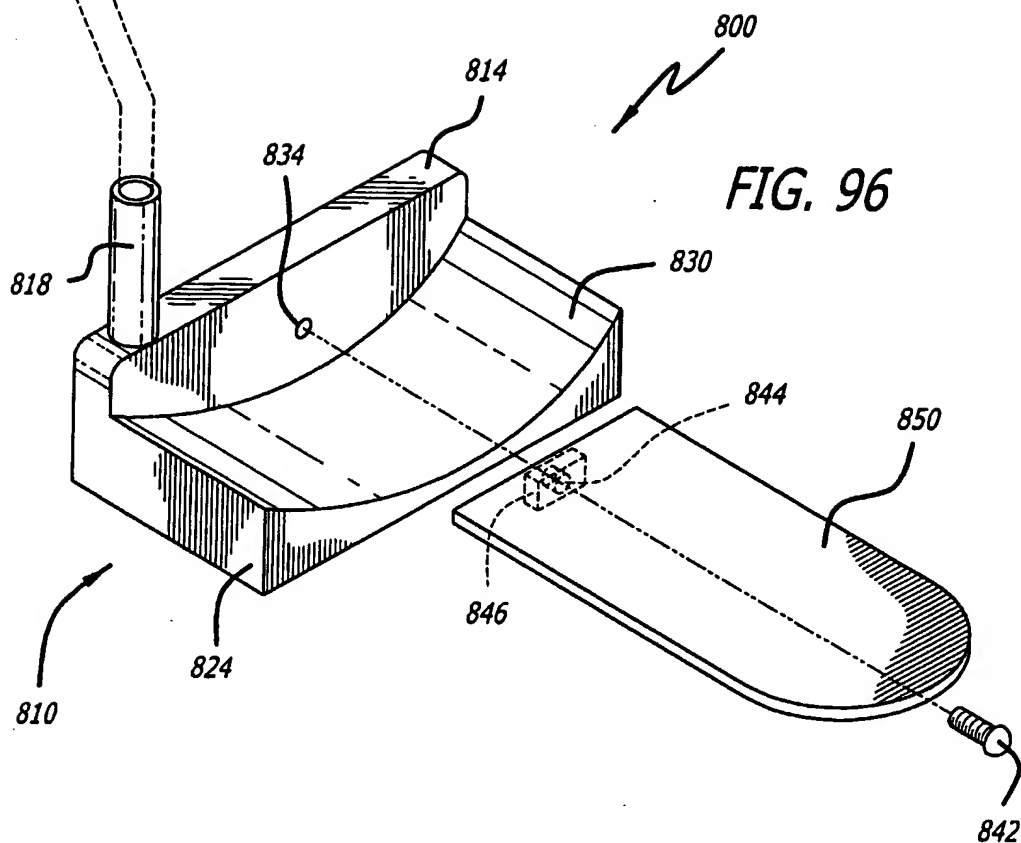
510



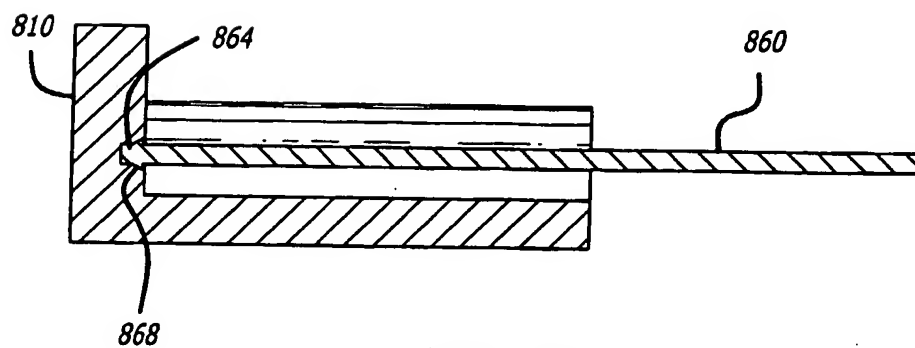
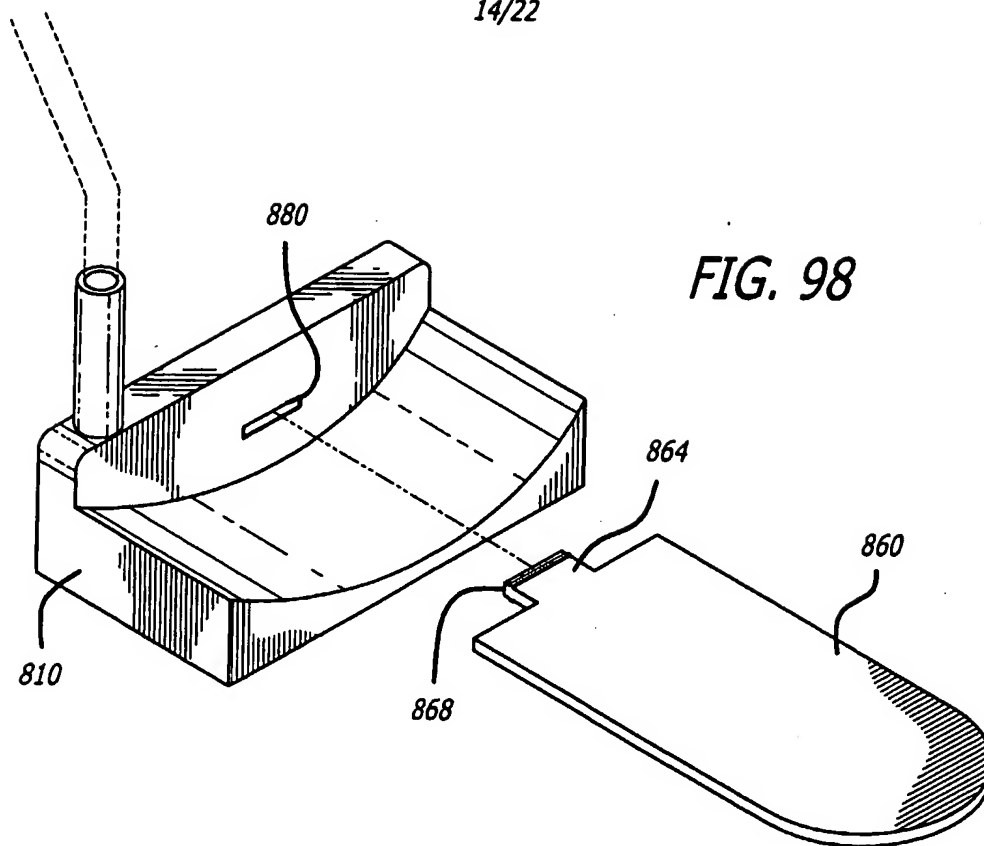
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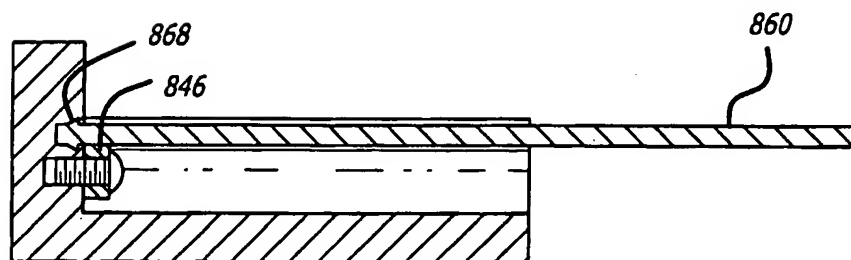
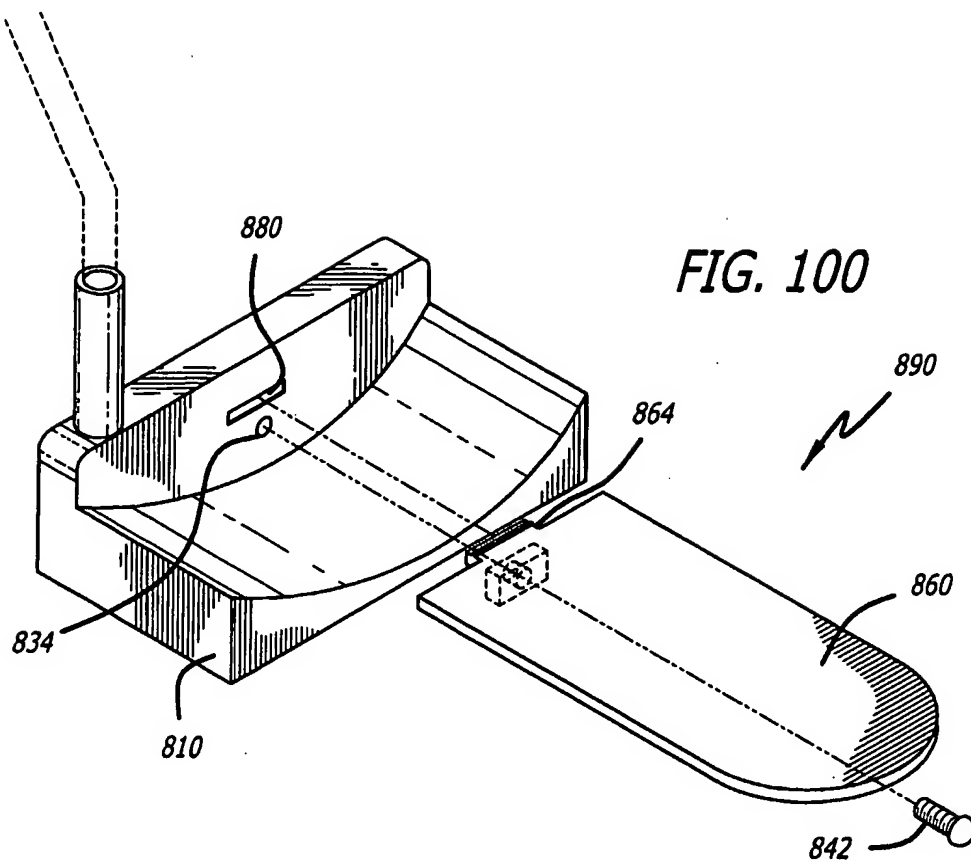


FIG. 101

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FIG. 102

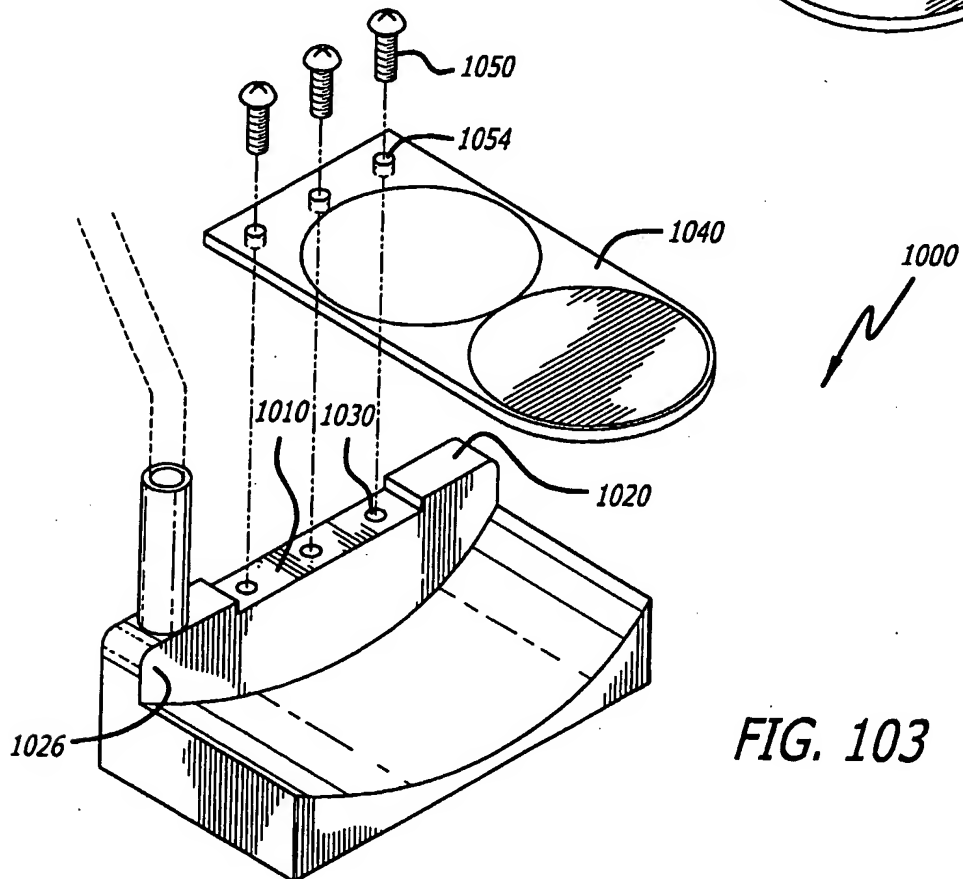
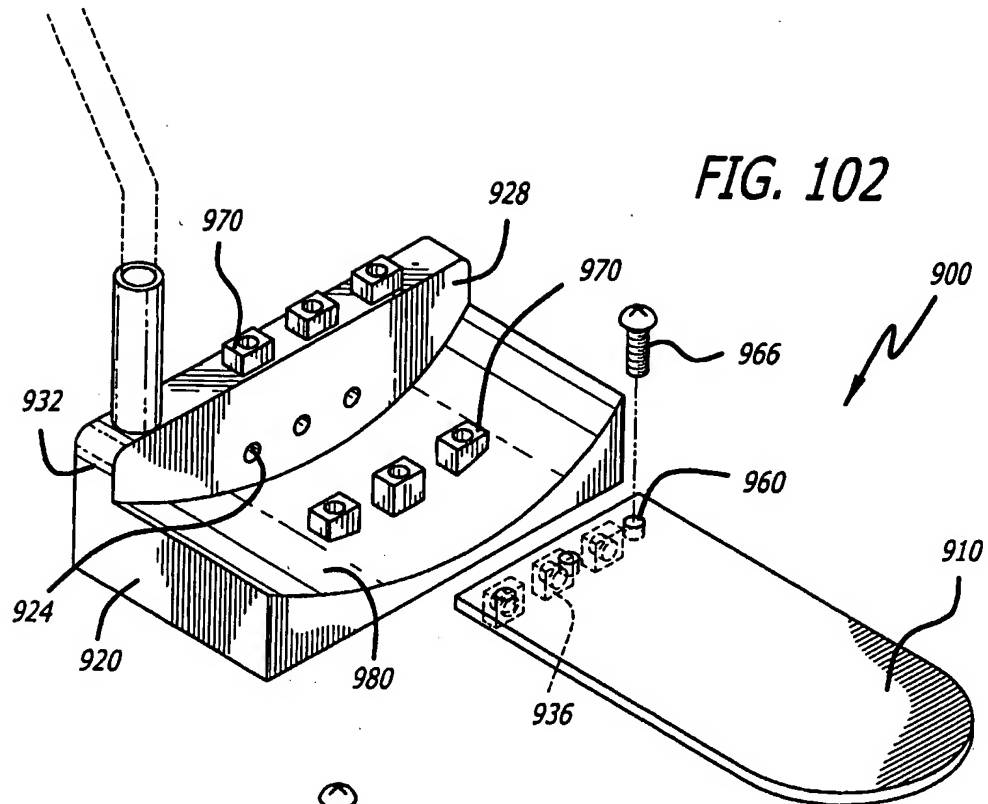
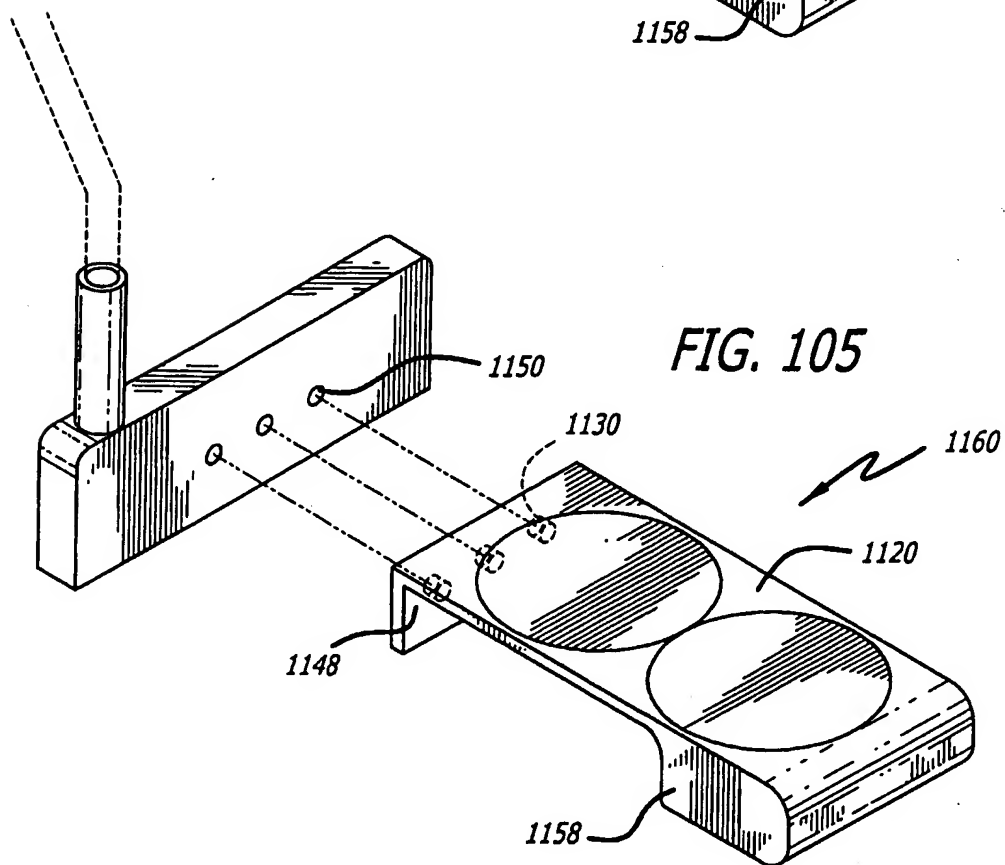
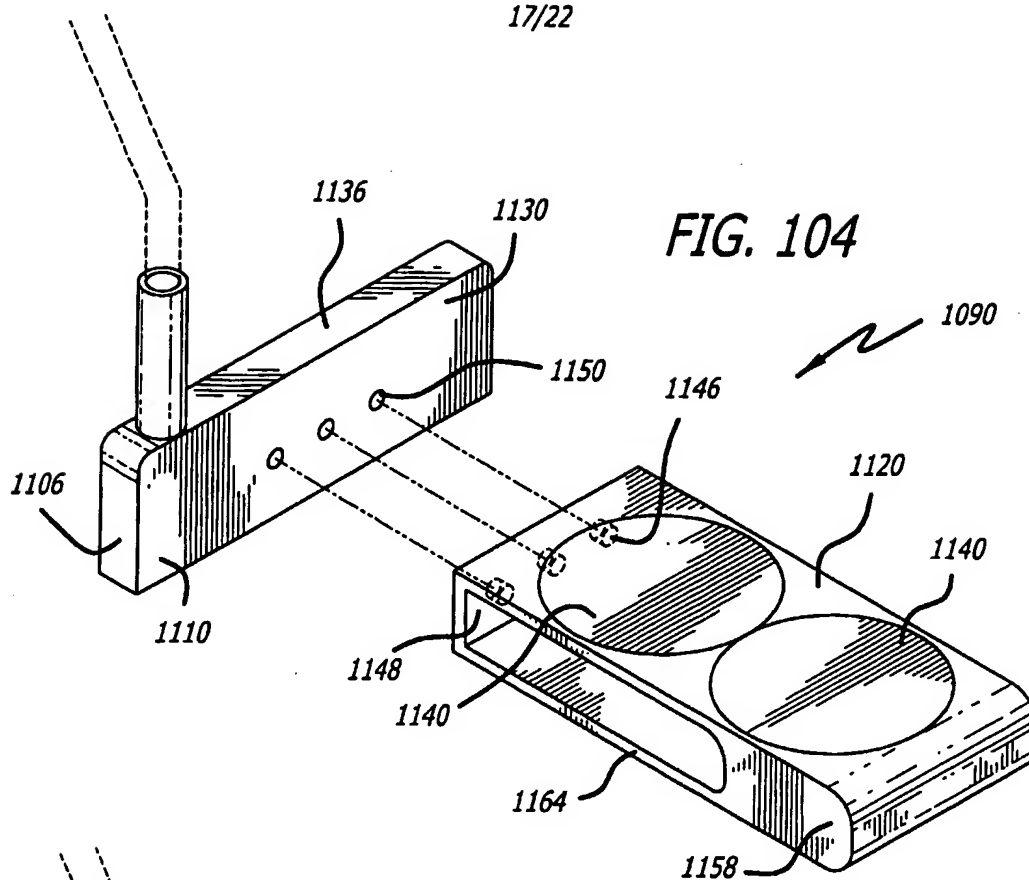
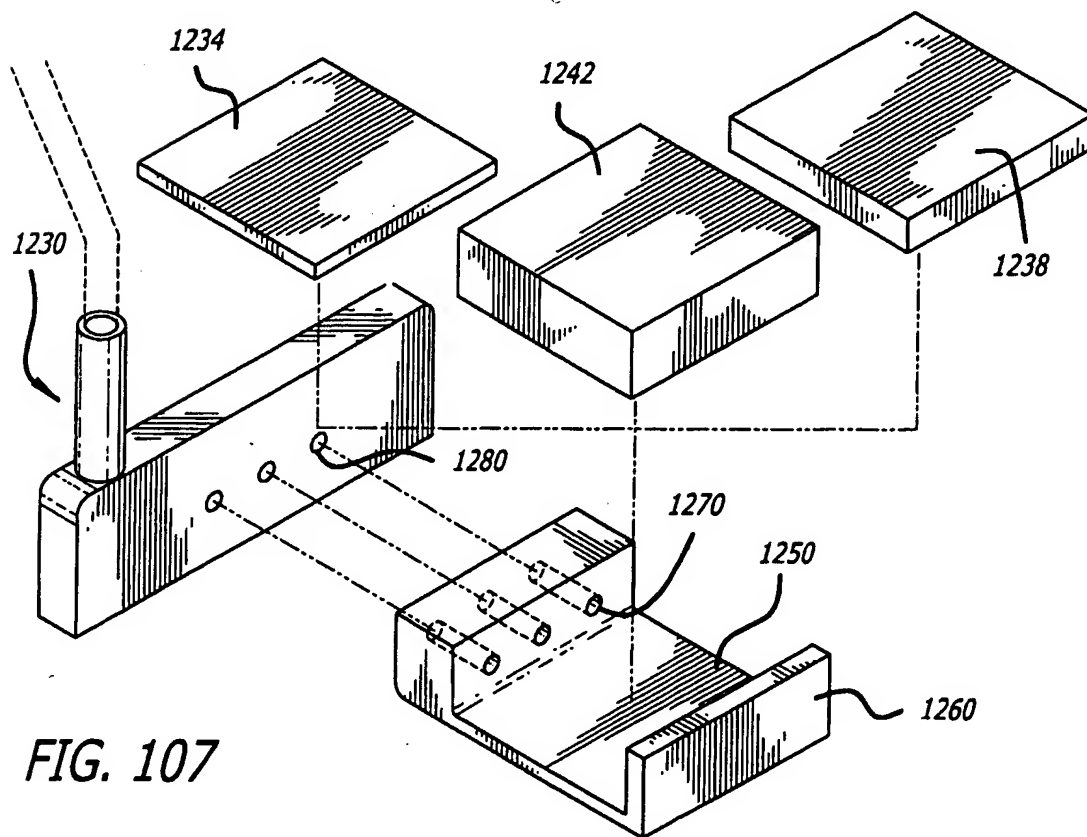
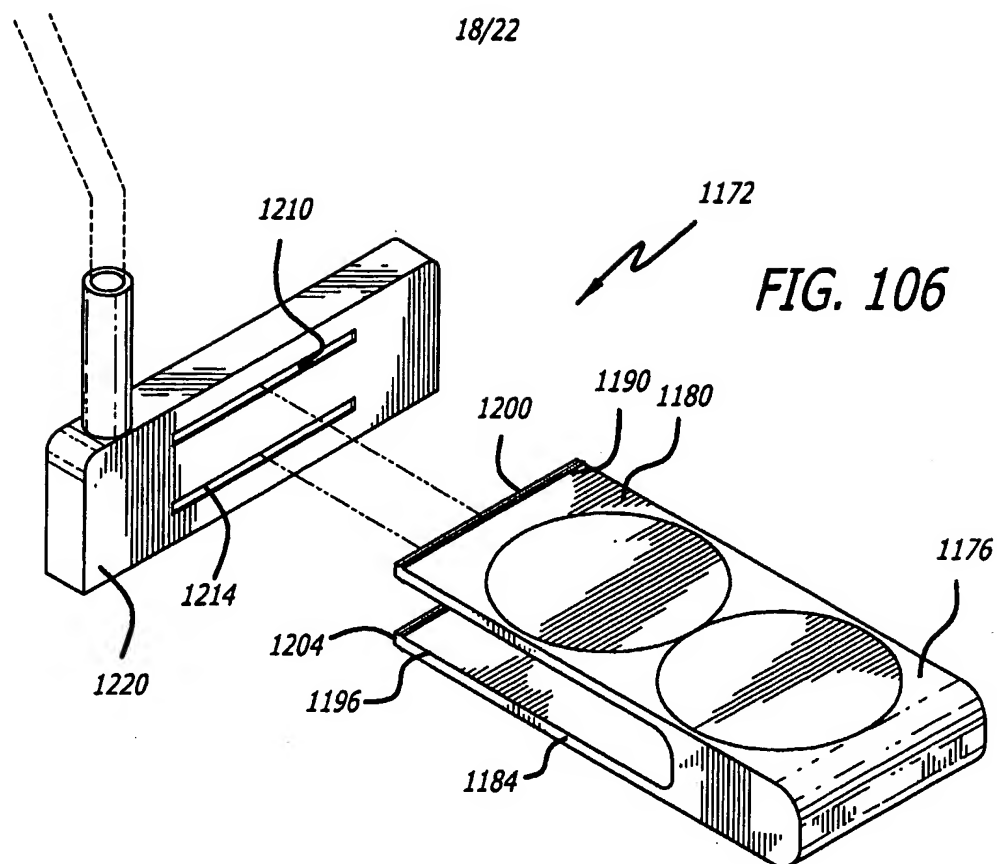


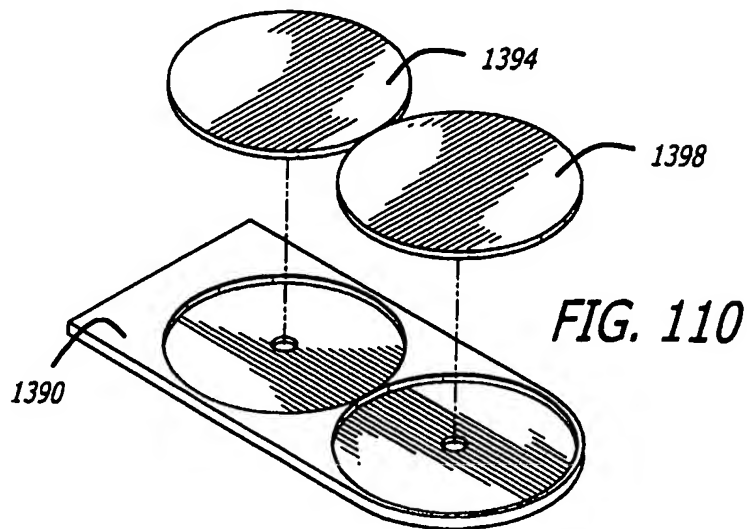
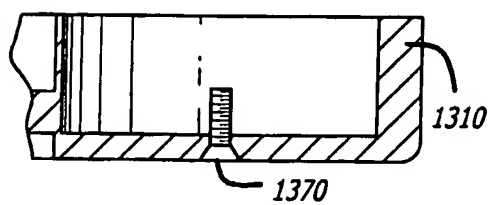
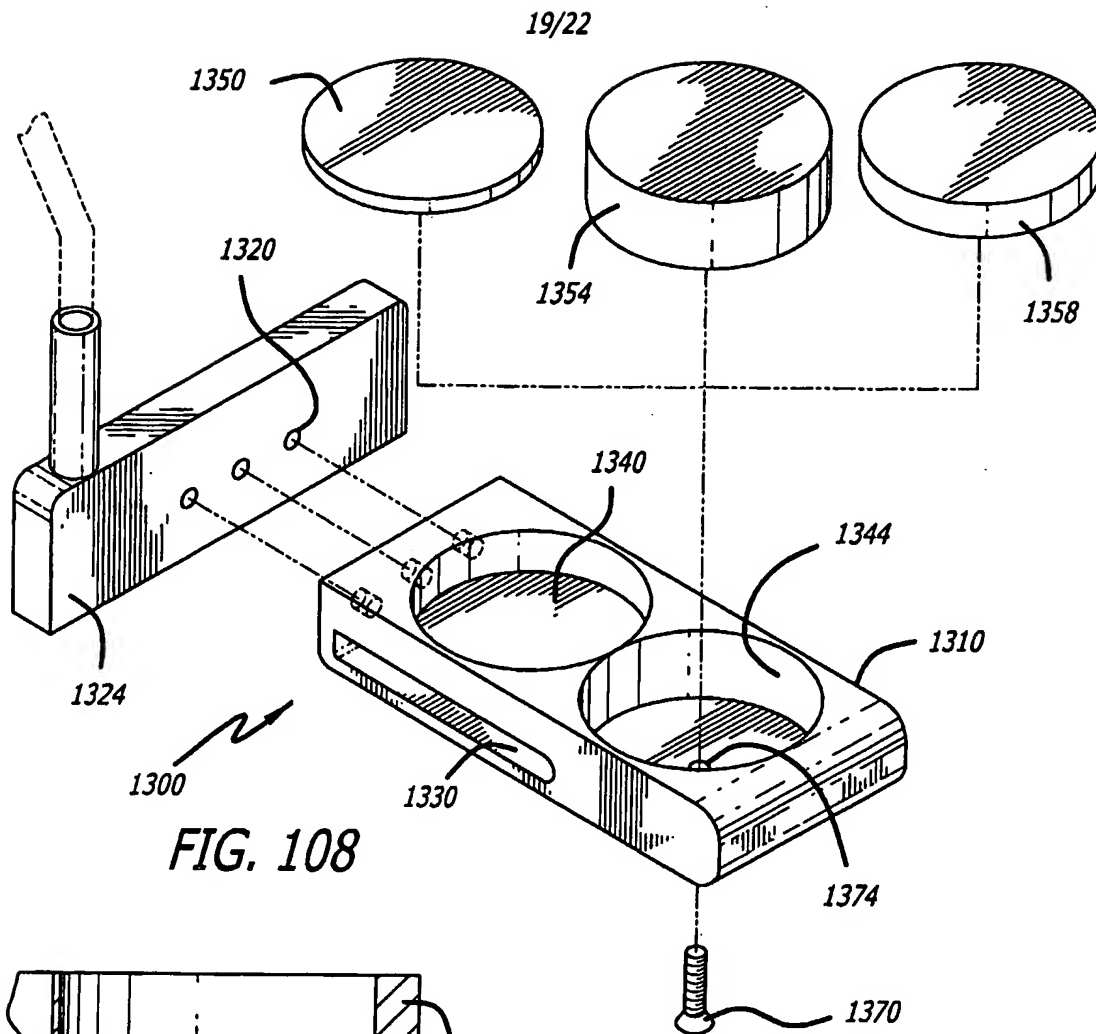
FIG. 103

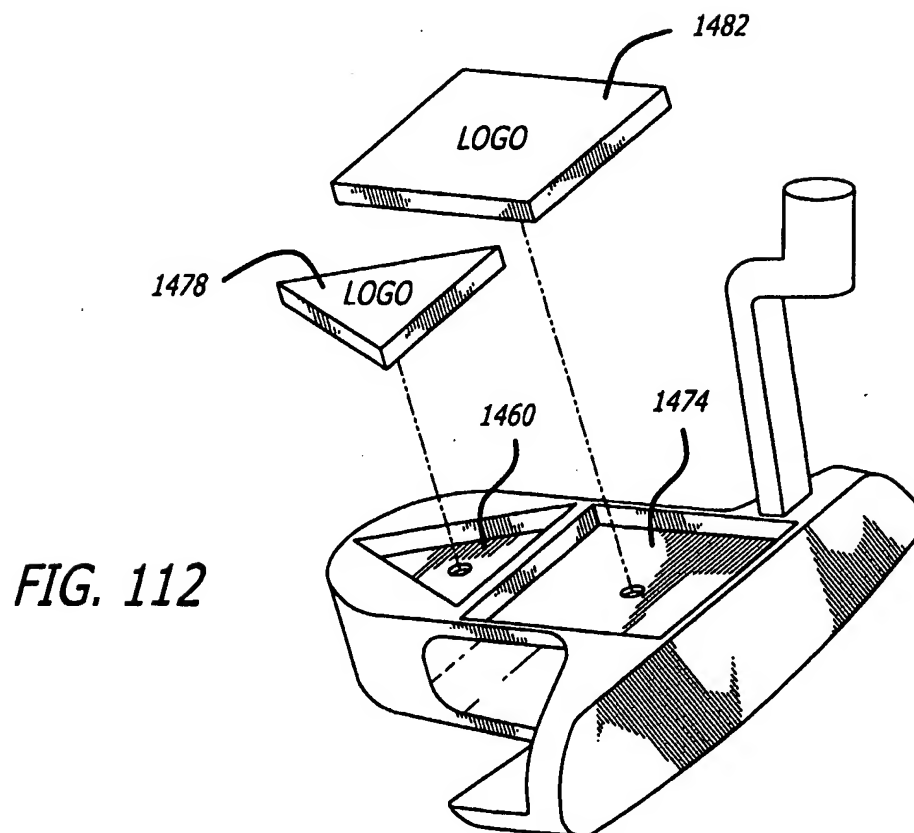
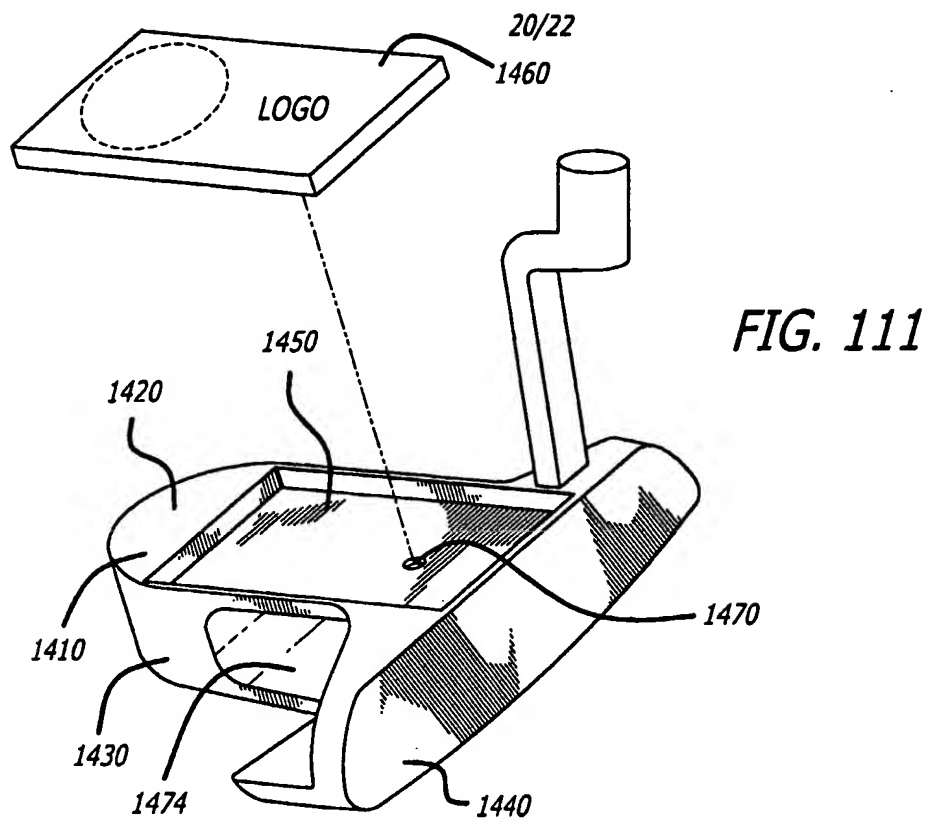
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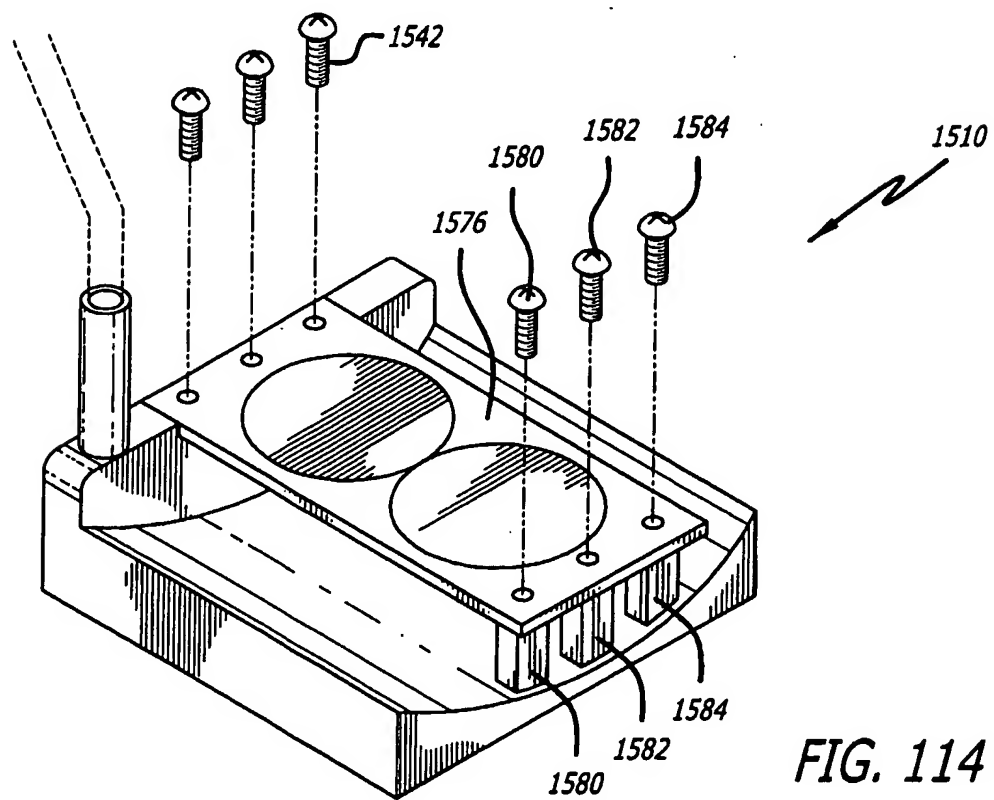
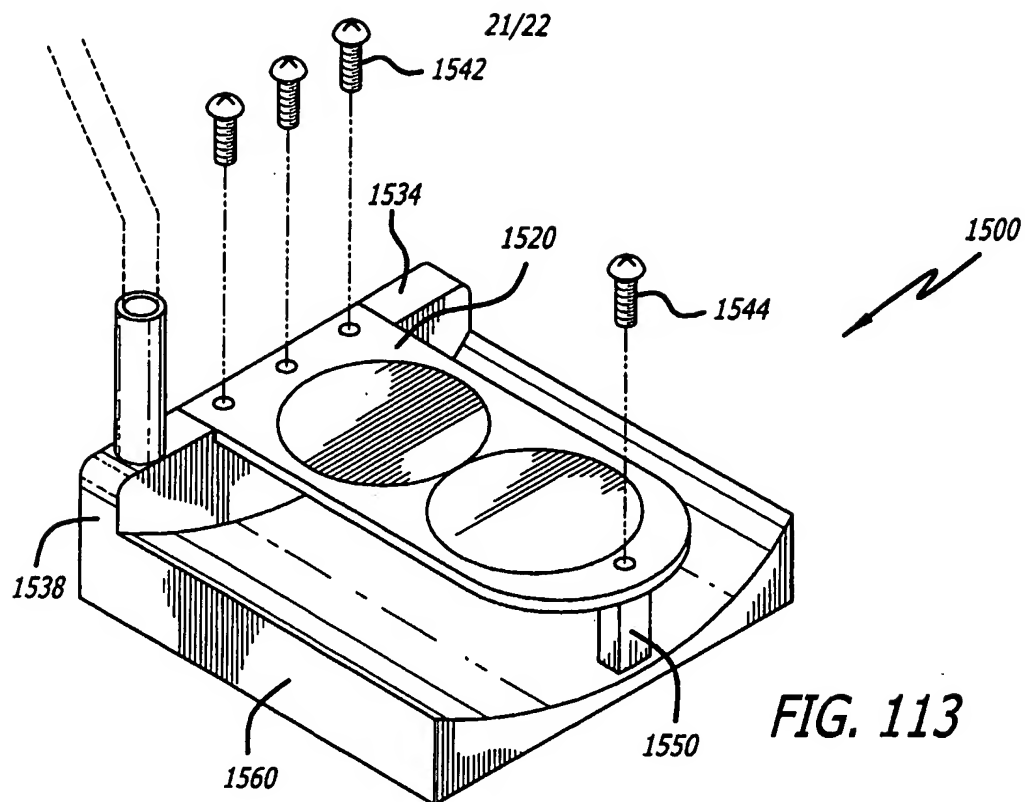


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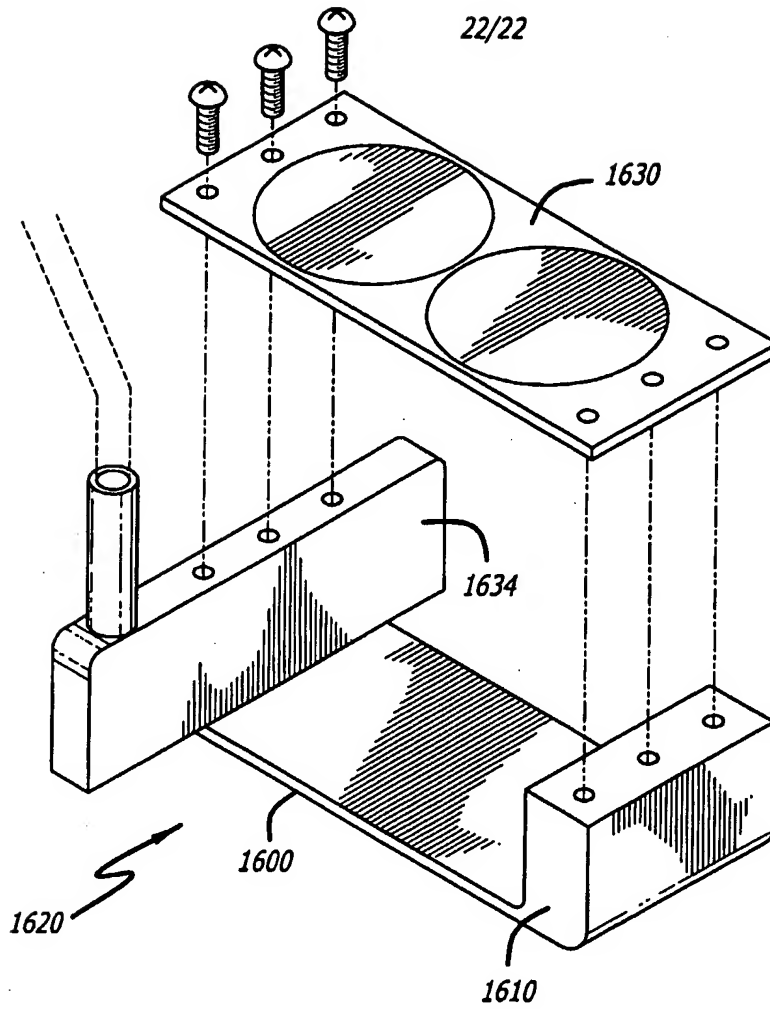


FIG. 115

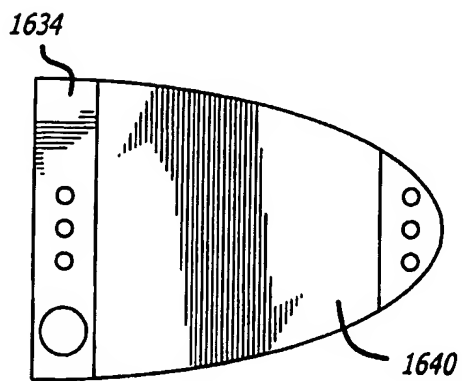


FIG. 116

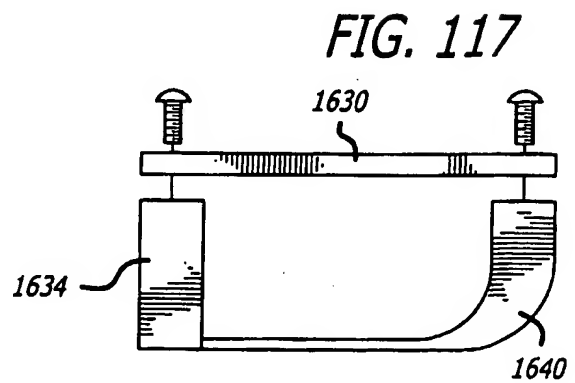


FIG. 117

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/05344

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A63B 69/36

US CL : 473/242, 244, 251

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 473/242, 244, 251, 219-241, 243, 245-250, 252-255, 340, 341; D21/736-746

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,160,142 A (MARSHALL) 03 November 1992 (03.11.1992), column 4, lines 18-46 and column 5, lines 42-59 and Figure 1 and Figures 7-10.	1, 2, 5, 8, 10, 14, 19, 20, 31, 32, 33, 35, 39, 41, 43, 44, 56, 58-64, 66, 67, 69, 70, 71, 73, 82, 86
X	US 3,880,430 A (MCCABE) 29 April 1975 (29.04.1975), column 6, lines 2-54 and Figures 14-15.	1, 2, 7, 8, 9, 31, 32, 33, 35, 39, 55, 56, 58-60, 64, 65, 69
X	US 5,143,376 A (JOHNSON) 01 September 1992 (01.09.1992), column 2, lines 43-66 and column 3, lines 56-68.	1, 2, 11, 13, 19, 27, 29, 32, 33, 34, 39, 55, 64, 71, 111
X	US 2,503,506 A (MILLER) 11 April 1950 (11.04.1950), column 2, line 22 through column 3, line 70.	1, 2, 6-9, 19, 22, 26, 30, 31, 32, 33, 35, 39, 42, 45, 46, 55, 56-65, 69, 70-73, 80-84, 86, 115



Further documents are listed in the continuation of Box C.



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"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	"A" document member of the same patent family

Date of the actual completion of the international search

27 June 2005 (27.06.2005)

Date of mailing of the international search report

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Sebastiano Passaniti

Telephone No. 703-308-0858

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/05344

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,471,600 A (TANG et al) 29 October 2002 (29.10.2002), column 3, line 54 through column 4, line 24 and Figures 1-2.	112, 113, 114, 116-122, 128, 132, 133, 135
X	US 6,558,268 A (TINDALE) 06 May 2003 (05.06.2003), column 2, line 46 through column 3, line 21.	1, 8, 12, 19, 24, 31, 32, 33, 39, 40
X	US 5,551,695 A (WOLK) 03 September 1996 (03.09.1996), column 6, lines 47-61.	1-3
X	US 5,362,058 A (HONIG) 08 November 1994 (08.11.1994), column 3, lines 28-55 and Figure 1.	1, 2, 15-18, 39, 64, 71
Y		4, 23, 25, 74-77, 87
X	US 4,135,720 A (LANCELLOTTI) 23 January 1979 (23.01.1979), column 2, line 49 through column 6, line 27.	1, 2, 5, 8, 9, 19, 26, 28, 30-33, 37, 39, 46-57, 64, 65, 67, 68, 69, 71, 78-81, 98-100, 105, 106, 115-119, 121, 123, 127, 134
Y		36, 38, 102, 108, 109, 110, 124-127
A	US D248,181 A (CERVANTES) 13 June 1978 (13.06.1978), see Figure 1.	1-135
A	US 3,360,268 A (MOLINARI) 26 December 1967 (26.12.1967), see Figure 1.	1-135

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/05344

Continuation of B. FIELDS SEARCHED Item 3:
EAST
search terms: magnet, golf, screw, alignment, putter

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